

UNIVERSITY OF KWAZULU NATAL

**The effects of Family Work Conflict on employee
productivity among night shift employees' in a Private
Health Care Facility**

Movini Pillay

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Supervisor: Prof. Muhammad Ehsanul Hoque

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Abstract

A person is made up of various roles, a wife or a husband, a parent, a child, a sibling, a support structure and an employee. These various roles can cause conflict among each other. The age-old conflict is between a persons' family life and their work roles; this is especially true for Night Shift employees'. Family-Work Conflict occurs when an employee's family life interferes with their duties at work. Night shift for employees is a problematic issue faced by both the company and the employees. Both the company and employees understand that an unproductive employee is detrimental to the patients' health. The role conflict between family roles and work roles become an issue when employees' do not get enough rest to perform their work duties efficiently and therefore affecting both patient and employee health. With any private health care facility, the priority is their patients, but the need to look after staff is quickly becoming a concern as this will, in turn, affect the patient.

This study will look at how family work conflict can affect an employee's role at work. Research shows employees with a supportive family will have reduced Family-work conflict compared to those employees with less supportive family. This research will also look at other methods employers could use to curb the effects of work-family conflict on employee productivity.

A quantitative approach has been used. Questionnaires have been administered to night shift employees to ascertain the impact in which family life impacts their work roles, as well as to identify if employees have found ways of dealing with this. A population of 75 permanent employees were used, a sample of 52 was selected through stratified sampling and a response rate of 80% was achieved.

Results show that night shift employees do experience family-work conflict, but each demographic experience's it to a certain degree. Females, parents with children between the ages of 11 and 17, and parents with 1 child, experiences family-work conflict more than other demographics. The need for rest and sleep while on shift was evident from all demographics.

Recommendations from the research indicates that the organization can support employee through providing time for them to rest, marketing of wellness programs and providing day-care for children.

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Chapter One

Introduction to the study

1.1 Introduction

According to the literature on family and work domains are indicative of conflict. Employees need to be accountable for managing their family roles in conjunction with their work roles. According to Deci & Vansteenkiste (2004), in social science literature, this conflict has been documented since early times. Social norms, changes in family structures and changes in the workforce elevates the pressures felt by today's employees. Towards the end of the 20th century, women in the workforce, dual-earning households, and single-parent households have become a dominant feature. As the changes in family structures occurred, the labor force has increased, and the traditional family structures decreased (Ahmad, 1996).

Night duty employees is an employee that works a night shift of 12 hours for a few nights a week. This type of shift allows employees time off during the day and in between shifts to look after their families and home. Most night shift employees agree that working night duty improves their work-life balance. However, activities during the day can reduce time to sleep and rest, and the family roles can impact the employees night shift productivity. The objective is therefore, to investigate the impact of day activities and family roles play on employees productivity during their night shift,, the possible solutions to this problem and if this solutions are sustainable.

1.2 Motivation for the study

The healthcare industry plays a vital role in society and the South African economy. Role players in the healthcare industry have a duty to ensure safe and effective treatment of patients. However, if healthcare professionals are pre-occupied and tried from other roles in their lives, needed attention is not given to patients. The role conflict employees experience directly impacts the level of care that is given to the patient. This study has investigated the reasons employees experience family-work conflict and the possible solutions that can be applied to

this problem. Family-work conflict is a problem as it decreases an employees attention during their shift and reduces the amount of rest employees receive during the day, therefore impacting their productivity and performance (De Sousa, 2013).

Due to the increased risks to patient care, it is crucial for healthcare organizations to find ways to mitigate this problem as this could hinder patient care and affect the profits of the company. Employees are also in danger; night shift employees face mental and physical elements that affect them due to working the night shift, it is crucial that employees be well-taken care by the organization and their families to maintain both a family and work role. Most studies on family and work roles show the increased way that work affects families roles; this study looks at ways in which the family can be supportive of the night duty employee to ensure their productivity at home and work. By ascertaining if the solutions are viable and sustainable, patient safety and care can be ensured provided that healthcare facilities take these solutions into consideration. Many studies have been done on the work and family relationship. However, few studies have taken into account the impact of family roles on work productivity. As the society changes around us, family roles impact work roles more often hindering the employee's capabilities.

1.3 Focus of the study

This study will evaluate alternative ways in which healthcare facilities can approach family-work conflict and productivity. It will look at viable and sustainable solutions to the impact of family roles on employee productivity during the night shift.

1.4 Problem Statement

Role conflict between family and work roles is fast becoming a problem in all industries affecting employee productivity. The healthcare industry is of particular interest as this involves the lives of patients. Companies have made provisions to allow staff to rest between their shifts. However, activities during the day on their “on duty” nights prevent staff from rest affecting their productivity at night.

Solutions to this problem need to be explained to understand if they are sustainable in this industry.

1.5 Research questions and objectives

Nurses are compassionate individuals and often put the needs of others before themselves. They strive to ensure both their family and patients are well looked after while neglecting themselves (De Sousa, 2013). Employees that work night shift tend to look after patients at night and look after their family during the day; this means that employees are now too tired to perform their duties efficiently. Night duty is often associated with Men, but in the healthcare sector, women play the majority role. Women are caregivers to their families, mothers to their kids, housekeeper of their homes and wives to their husbands (Burgess, 1997). It is often said a women's job is never done. In this current state night, shift work will affect a women's family life, career, and health (Alspach, 2008). The objective is to ascertain the extent to which night shift employees' family life interferes with their productivity at work. Solutions have been provided in other countries and other sectors, the research will also investigate these solutions to see if they are viable and sustainable in the healthcare sector.

Research Objectives:

- 1) How do night shift employees experience an effect of family work conflict on their performance? To find solutions to staff being more productivity on duty
- 2) To identify if these solutions are viable and sustainable

Research Questions:

- 1) Are night shift employees experiencing an effect of family work conflict on their performance?
- 2) What are the possible solutions to improving the productivity of these staff members during night shift?
- 3) Seeing that nursing staffs the main purpose is nursing care for patients, will these solutions be viable and sustainable?

1.6 Definitions of Terms

Work-life balance is a contemporary term for achieving a balance between work and lifestyle ambitions (Baxter, 2002). Nurses are loyal to their patients and co-workers. They often put the necessities of others before their own. Nurses on night shift find this problem more significant due to them being home during the day with their family (Bateman, 2006). Employees spend the night looking after patients and the day looking after their families. Most nurses face the challenge of balancing demands and achievements of work with those of their private lives.

Family-Work conflict is a type of inter-role conflict that occurs when the demands of work and family roles conflict (Byron, 2005). For this study, the researcher will only look at factors from the employees' family life that will affect their work productivity. Family to work conflict occurs when family life interferes with work. Conflict theory proposes that work and family domains are incompatible due to their different norms and responsibilities of work and family cause intrusion and negative spillover of one domain on the other (De Sousa, 2013). The more hours spent on family, housework, childcare or other nonwork-related activities the more family work conflict is experienced.

Employee productivity is the measure of the efficiency of a worker or group of workers. According to research, a nurses' productivity should be measured by the hours of nursing care they provide per a patient (Folkard & Tucker, 2003). However, other researchers argue this point as the amount of skill nurses show will also affect the level of care they give to a patient. Nurses make up the largest group of workers in hospitals and use up the majority of the budget. As a result, it is vital that Healthcare facilities look at productivity and efficiency of their nursing resources. With information like this, line managers can make decisions regarding allocation of staffing in their departments, thereby increasing efficiency and productivity of personnel.

1.7 Methodology

The research approach is a strategic plan of action the researcher undertakes to conduct the research (Wilson,2010). A qualitative approach has been used. A qualitative research method is a research approach which uses numbers and statistics (Cresswell, 2014).Questionnaires constructed using this approach are closed-ended or structure questions. Qualitative data allows for collection and analyses of more data than quantitative approaches (Saunders, Lewis, & Thornhill, 2016).

The selected healthcare facility is one of the most extensive healthcare facilities in KwaZulu- Natal, with a permanent night duty compliment of 76 employees. Stratified random sampling was conducted to ensure that all department, ranks, and demographics were represented in the study. A sample size of 52 employees was selected, and only 42 questionnaires were returned.

A questionnaire was constructed using closed-ended questions. The questionnaire was put through a piolet test to ensure the validity of the instrument. The questionnaire was developed from literature research on this topic.

The questionnaire was handed out to sample population, they were given one hour to complete the questionnaire, and the questionnaire was collected on the same night. This was done to ensure a reasonable return rate. The researcher achieved a return rate of 80%. Data from the questionnaires collected were coded and analyzed using SPSS.

1.8 Limitations of the study

Employes were visited during their night shift and time was taken away from their duties to complete the questionnaire. To curb this problem, the questionnaire was multiple choice questions that could be answered in 20 minutes.

The study was conducted on permanent staff members only, agency and temporary employees were not included in this study.

1.9 The structure of the study

The study is presented as follows:

Chapter one- Introduction- this chapter provides background information on the study, the research problem, the research questions and objectives and an overview of the research methodology.

Chapter two- Literature review- this chapter presents a thorough summary of previous research studies that were consulted. This chapter provides a description of the actual literature review process and the various issues related to the topic.

Chapter three- Research Methodology- this chapter provides a summary of the research concepts and theories surround the research project. It also explains the research methods used in this study.

Chapter four- Presentation of results- this chapter provides a summary of the results obtained from the study. Data analysis using SPSS was presented in this chapter

Chapter five- Discussion- this chapter provided a discussion of the results in relation to previous studies done on this topic.

Chapter six- Conclusions and recommendations- this chapter provided a conclusion to the study, it resented findings of the study, areas for further research and shortcomings of the current research.

1.10 Summary

Chapter one provides an overview of the current study. It gives the reader a summary of what to expect in the coming chapters and dictates the direction that the study will take.

Chapter Two

Literature Review

2.1 Introduction

The introduction to this study has provided a road map of what the researcher has investigated. The literature review is a critical assessment of information written about a topic, it is the analyses and synthesizes of information of a topic, theme or issue, and it provides the background for the more substantial work (Saunders et al., 2016). This literature review provides in-depth information regarding the study of Family-work conflict, performance, and solutions. This literature review looks the theoretical and empirical review of a family-work conflict. In the theoretical review, the researcher has used action research to investigate the causes of work-family conflict in private healthcare facilities. The empirical review discusses the research behind the research questions and is structured according to the research questions. First an in-depth look at work-family conflict and the performance of nurses on night duty in private healthcare facilities, the researcher will then look at solutions to work-family conflict and performance improvement. Moreover, under the empirical review, the research investigates if these solutions are viable and sustainable. Relationships between work-family conflict, performance, and the solutions will be identified before research gaps are investigated before concluding this chapter.

2.2 Theoretical framework

The theoretical review of literature focuses on theoretical frameworks, operational definitions, and the research's underpinning theories.

2.2.1 Action Research

Action research has been used as the researchers chosen research strategy. According to Saunders et al. (2016), Action research is a developing and iterative

progression of inquiry that is intended to develop solutions to real organizational difficulties through a participative and collective approach. Action research has five themes: Purpose, process, participation, knowledge, and implications (Saunders et al., 2016). The reason this type of research was chosen as the purpose is to promote organizational learning, this type of research will be used to identify if the family-work conflict is prevalent in night duty staff and if so, how can we as an organization solve this problem and monitor it, so it is not abused. The integrated approach will first be used to identify the current practices and procedures or the organization; Action research has been done, to understand if this is a problem and the derive solutions to this problem. After that theoretical research will be done to understand if these solutions are viable and sustainable.



Figure 2.1 Action Research Model (Source: Adapted from Babbie, 2013)

Action research involves 4 phases (Babbie, 2013): Planning, acting, observing and reflecting. The planning phase includes identification of the problem. In this phase, the researcher has identified Family-work conflict to be a problem as it impacts on the employee's state of mind and wellbeing and therefore impacts productivity (De Sousa, 2013). The acting phases of the research involved the development of the questionnaire, handing out of the questionnaire during the pilot study, handing out the questionnaire to the sample population and the collection of the questionnaire from respondents. During the observation phase, data collected were coded,

analysed and conclusions deducted based on results obtained from the questionnaires. In the evaluation phase, factors influencing Family-work conflict was identified, possible solutions to this problem were identified, and research was done to justify the viability of these solutions.

2.3 Empirical Framework

Empirical research was done through research, observation, and collection of data. Information gathered from this method supports the research objectives in gathering information pertinent information for the research study (De Sousa, 2013). Empirical evidence is used to verify the study and its objectives.

2.3.1 Introduction

Shift work is recognized as a risk factor for many health and family problems (Guo et al., 2013). These can be related to family-work conflict, family role conflict, work environment, and job stability. Family work conflict is related to the conflict between two opposing roles, professional working life and family life (Yildirima & Aycanb, 2007). Conflict arises due to the roles in a family and at work that is not always compatible (Netemeyer, Boles & McMurrin, 1996). Pressures of work are taken into the family life, and pressure from the family life is taken to work. As more women are taking on professional careers, family role conflicts emerge. Gender roles in families are becoming blurred as men take on more responsibilities of women or women overexerting themselves to perform in the professional field as well as a mother or wife (Yildirima & Aycanb, 2007). According to Khan, Wolfe, Quinn, Snoek & Rosenthal (1964: 19), role conflict is defined as the, coinciding incidence of two (or more) sets of pressures such that compliance with one would make more demanding compliance with the other.”

This section will look at the evidence that explains the topic and looks at the various factors that influence the problem of Family-Work conflict. This section will also look at solutions and viability of solutions through primary and secondary data collection.

2.3.2 Family-Work Conflict and Work-Family Conflict

The conflict between work and family is a topic which has been extensively researched in organizational behaviour. Recently, various studies have been conducted to better our understanding of the dynamics of how family and work affect each other (De Sousa, 2013). Family and work relationships can be multidimensional and complicated. Work-Family conflict arises when incompatible expectations and demands arise from family and work roles (Netemeyer et al., 1996).

2.3.2.1 Definition of Work and Family Conflict

According to De Sousa (2013), figure 2.2 below demonstrates a definition of work and family conflict. From the figure below, inter-role conflict has two forms: Role interference and Role Overload. Role interference occurs when neither role can be satisfied as the demands of each role conflicts (De Sousa, 2013:20). Role overload occurs when time and energy demands exist from two or more roles exceeding the individual's capability to perform either role efficiently (De Sousa, 2013: 20). According to Powell & Greenhaus (2010), a definition of Work-Family conflict and Family-Work conflict indicates a presence of irreconcilable conflict, however, there isn't an indication of the direction of the interference between the

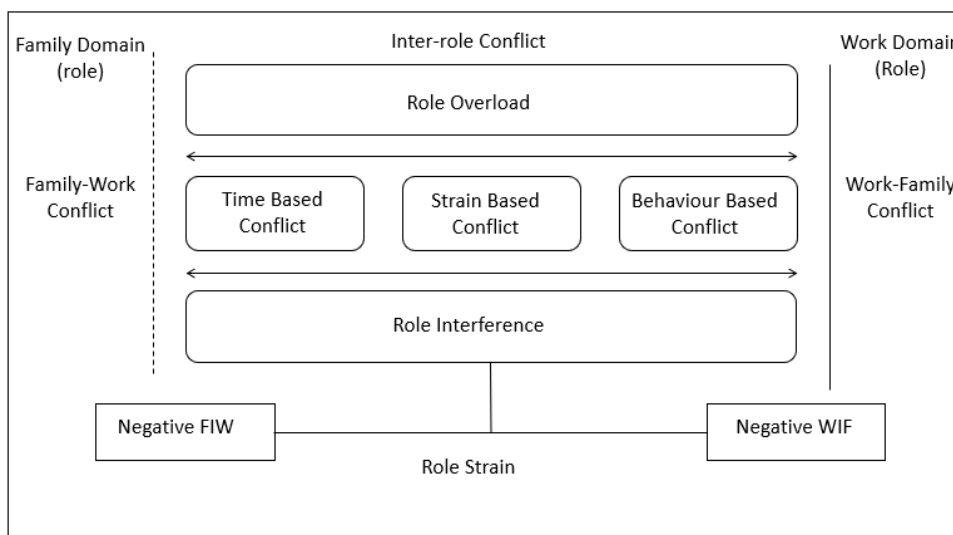


Figure 2.2 Definition of work and family conflict (De Sousa, 2013)

Interference happens when there is a demand conflict between the requirements of either role, therefore satisfying neither role, this harmful interference becomes a conflict (Powell & Greenhaus, 2010).

Conflict arising from work and family interference has three forms (De Sousa, 2013: 21-23).

The first form is time-based conflict, which is the time dedicated to roles in one domain limiting the time accessible to perform roles or duties in another domain. The nature of conflict an individual experience increases in direct proportion to the hours spent on each role (Powell & Greenhaus, 2010).

Strain-based conflict is the second type of conflict. This involves strain from one domain hindering the role demands in the other domain from being satisfied. Netemeyer et al. (1996), states that strain-based conflict takes the form of anxiety, stress, irritability, fatigue, and tension, these forms may be caused by extended working hours, overtime and travel.

Lastly, the third kind of conflict is behaviour-based conflict. Behaviour-based conflict occurs when patterns of in-role behaviour in one domain is incompatible the behaviour expected within another role. When individuals are unable to change behaviour to conform to various role expectations, individuals are likely to experience interference between these roles (De Sousa, 2013).

2.3.2.2 Enrichment and theoretical approaches to Family-work Conflict

Conversely, there could be a positive side to the relationship between work and family roles known as enrichment (Powell & Greenhaus, 2010). Researchers have attempted to provide a more holist view of this positive side (De Sousa, 2013, Frone, 2003). These implications assume there can be a positive relationship due to the transference of positive experiences from one role to another (Powell & Greenhaus, 2010). Family-work enrichment refers to the degree in which experiences in one role enhances the quality of life in the other role (De Sousa, 2013).

According to the expansionist approach proposes that energy is created by participating in one role and this energy is transferred to the other role (McNall,

Masuda & Nicklin, 2010). This implies that enrichment happens when energy and rewards in a specific role improve performance in another role and these resources could be flexible work hours, gifts, financial rewards, emotional and interpersonal skills (McNall et al., 2010).

The theory of satisfaction of basic needs which is derived from the self-determination theory suggests that individuals are prone towards psychological growth and development. This provides a platform for researchers to identify why individuals would thrive in one role and feel unsatisfied in another role (Deci & Vansteenkiste, 2004). According to Powell & Greenhaus (2010), it, therefore, becomes essential for companies to understand how they can reduce negative experiences and capitalize on positive outcomes to create a balance between family and work roles.

Boundary theory explains how individuals separate certain role expectations to create boundaries helping them find a balance between the conflicting roles (Ashforth, Kreiner & Fugate, 2000). For example, some individuals may have different cell phones for work and family, work phones are put off after working hours, and family phones are put on silent during working hours. The boundary theory could be used to understand an individual's strategy towards creating a harmonious family-work balance (Kossek & Ozeki, 1998).

It is essential to consider the different theoretical approaches as they provide more insight from different schools on the importance of looking at family-work conflict from a holistic viewpoint.

2.3.3 Differences among demographics

The changing composition of the workforce and the increasing number of non-traditional family structures, has further elevated the awareness of friction between family and work roles (De Sousa, 2013: 17). This section looks at how different demographics influence Family-work conflict.

2.3.3.1 Gender Roles and responsibilities

Due to the increased contribution of women in the workforce, family and work conflict has become a topic of considerable interest (Powell & Greenhaus, 2010; De Sousa, 2013). According to Yildirima & Aycanb (2007), research confirms that women experience more family-work conflict as most of their time demands are in the family domain. It was initially assumed that male's contribution would increase towards domestic and child-rearing activities as women spent more time in paid employment. However, data gathered from numerous studies show that women are still responsible for the more significant part of the domestic role (De Sousa, 2013; Baxter, 2002; Powell & Greenhaus, 2010). According to Family-work enrichment suggests that in participating in these various roles could be beneficial (McNall et al., 2010). Although females still assume most of the responsibility for domestic roles, it is still unclear which gender experiences the most family-work conflict. Baxter (2002), found no difference in family-work conflict experience between male and female, which Byron (2005) and De Sousa (2013) found that females experience higher family-work conflict than males. According to De Sousa (2013), women experience more family-work conflict due to the acceptance of responsibility in children's schedules, children getting ill, or other emergencies at home. However, Baxter (2002), states that males tend to emergencies involving the repairs of the house and cars.

2.3.3.2 Age and family work conflict

Age is an essential factor to deliberate on when looking at family-work conflict as person experiences work-family conflict at different ages differently (Bagger & Gutek, 2008). Individuals between the ages 20 to 30 have more social interactions to consider, 31 to 40 have critical family and work roles and 40+ individuals concentrate more on family, self and extended family roles (Winslow, 2005). Winslow (2005) goes on further to state that more mature parents experience less family-work conflict than younger, less experienced parents. This could be because older parents have more resources at their disposal to deal with the role conflict between family and work roles. Individuals in their 40+ are more stable and established in their lives, more financially independent and better equipped to deal

with family and work conflict due to experience (Bagger & Gutek, 2008). However, Baxter (2002), found no difference between age and family-work conflict as each age group experienced role conflict which impacted their work roles. Powell & Greenhaus (2010), state that family-work conflict is experienced at every age group, the extent differs depending on other circumstances, for example, if they have children, if they are married, are financially stable, have a proper career direction or if they have dependents.

2.3.3.3 Married employees versus nonmarried employees

According to Powell & Greenhaus (2010), an employee's marital status does affect family-work conflict, but other factors will contribute to the extent to which it affects employees. Winslow (2005) states that married employees experience more family-work conflict than non-married employees. This is due to the demands of the spouse and the married relationship. The more demanding the roles and responsibilities of an employee to his or her spouse, the more family-work conflict an employee will experience (Winslow, 2005).

Gender roles and spousal support, play a significant role in the family-work conflict in relation to marital status (De Sousa, 2013). According to Powell & Greenhaus (2010), a married male and female would experience family-work conflict depending on the extent to which their spouse is helpful around the house and in the division of labour at home. The more a married couple can combine their efforts to manage their home the less family-work conflict they would experience in their jobs.

Spousal support of job choices also plays a prominent role in Family-work conflict, if a spouse is supportive of job choices the less likely the other spouse would experience family-work conflict (Bagger & Gutek, 2008). Activities like helping around the house, being understanding of work hours and looking after the children, shows support of the spouse and lessens the burden of family-work conflict (De Sousa, 2013).

2.3.3.4 Parents versus non-parents

According to De Sousa (2013); Powell & Greenhaus (2010) and Baxter (2002) parents would face more family-work conflict than nonparents. Dependant on factors like the ages of the children, the number of children, the ages of the parents and spousal support, employees would face family-work conflict at different degrees (Byron, 2005). According to De Sousa (2013), the ages of children influences working parent's family-work conflict to a large extent. A working parent would experience family-work conflict with an infant, a child in school and child in university; the family-work conflict would start decreasing after a child has finished their schooling. The number of children also affects family-work conflict, the more children a working parent has, the more they experience family-work conflict, but this is also dependant on the children's ages (Powell & Greenhaus, 2010). Baxter (2002) brings up an interesting viewpoint stating that the degree to which the number of children and the age of the children affects family-work conflict is also dependant on the parent's' ages, the more mature a working parent is, the less family-work conflict the parent would experience.

2.3.4 The 24 hours cycle of a night shift employee

Stemming from the definition of Family-work conflict in Figure 2.2 above, the

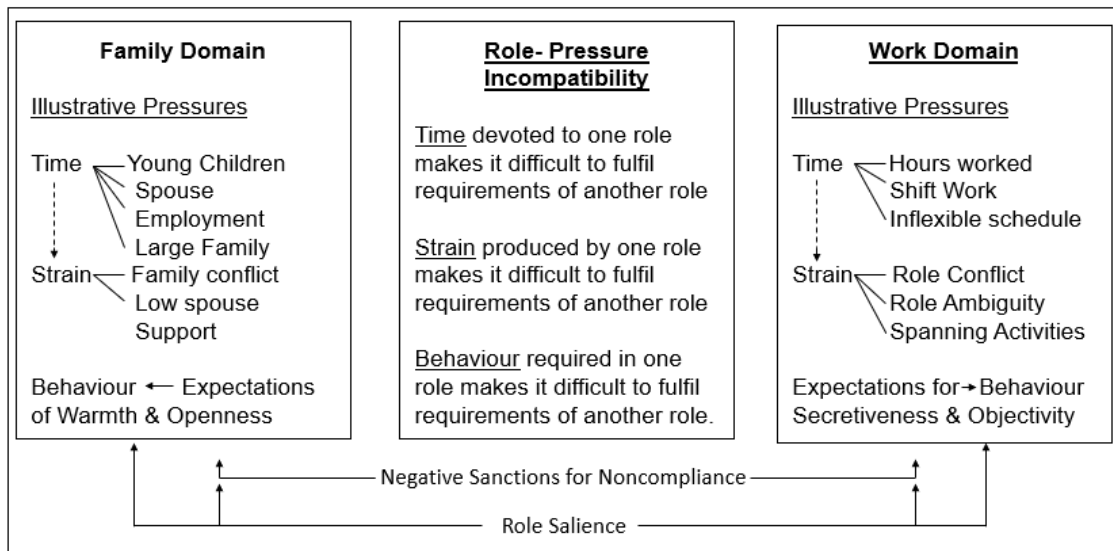


Figure 2.3 Model of family-work conflict (adapted from De Sousa, 2013; Powell & Greenhaus, 2010)

24-hour cycle of a shift employee shows how their time, strain and behaviour conflict affects the employee's roles. This gives way to Figure 2.3 which is a model of family-work conflict derived from De Sousa (2013) and Powell & Greenhaus (2010). The following aspects would affect an employee's time spent on both their family and work roles (Powell & Greenhaus, 2010):

2.3.4.1 Resting periods

Resting periods are essential as employees would experience strain in both roles without enough rest. Time is taken for one's self to rejuvenate the body and mind are vital for an individual to be productive in both a working environment and in family life. Numerous studies have been done showing the adverse effects of reduced sleep hours of shift employees on their health, performance, and wellbeing (Alspach, 2008; Guo et al., 2013; Khan et al., 1964). An adult needs a minimum of 6 hours sleep to efficiently function, and it is, therefore, necessary to identify how much time an individual spends resting or asleep (Guo et al., 2013). Lack of sleep affects employee productivity, and it is therefore in the company's best interest to ensure the employees are receiving enough hours to rest (Byron, 2005). The company is vigilant in ensuring shift employees receive enough time off to rest but it is essential to take note of what employees are doing in their 24-hours on a shift day as it would affect patient care and productivity (Khan et al., 1964).

2.3.4.2 Family Roles

A shift worker works for 12 hours, which means that the other 12 hours of their day should be spent on family roles and resting. If 6 hours of their day should be taken up by sleep, the individual is left with 6 hours in which they should be spending on family roles (Khan et al., 1964). Management of time on shift days is essential to employee well-being and productivity. According to De Sousa, the family role entails looking after a spouse, children, home, extended family and financial burdens. A spouse can affect family-work conflict depending on gender and the type of role the spouse plays in helping with the home and looking after children. If

a spouse is supportive of job choices, takes time to help with chores at home and takes equal responsibility to look after children and extended family members, then family-work conflict is reduced. For a male, family-work conflict may be reduced depending on how he views gender role responsibilities, but for a female who by society has been governed to look after the home and family, the family-work conflict could be high (De Sousa, 2013). In households in which working parents must look after children, family-work conflict may be highly reliant on the number of children and the ages of the children. However, in a household where there are no children, family-work conflict may still be high if individuals must look after extended family members like parent or grandchildren (Winslow, 2005).

2.3.4.3 Work Roles

Shift employees will feel family-work conflict on their “on duty shifts,” this is due to the limited hours they have in dealing with family roles. Organizations ensure that employees are working 12 hours shifts have enough time off to rest, in a hospital environment, this means set schedules of seven nights on duty and seven nights off duty (Guo et al., 2013). During their seven nights on duty, employees are expected to be well rested in order to perform their jobs efficiently, look after patients and give 100% of their attention to the job. However, as employees are tired from their day looking after their families and homes, this is not always the case. The organization takes steps and measures to ensure that employees get enough time off to rest and take care of their families but on “on shift days,” employees struggle to balance family and work roles (Guo et al., 2013). Performance of employees experiencing great family-work conflict, therefore, inhibits their ability to perform efficiently. A debate regarding if it is an employer’s responsibility to ensure staff gets enough rest during their on-shift days is questionable, as employers give staff enough time off to compensate for their 12-hour night shift, should the employee then make it their responsibility to be well rested for work during their on-shift nights? However, conversely, an employee not well rested will hinder patient care, so employers should take measures to ensure employees do get rest on their “on duty shifts” (Guo et al., 2013; Khan et al., 1964).

2.3.5 Possible solutions

It is not enough to present a problem; possible solutions also must be identified. Family-work conflict is interference of family life on work productivity. It is therefore essential to identify solutions in which family life can provide solutions to the problem. Organizations have developed structures to help employees rest enough to be productive, but as mentioned before, employees find it difficult to family and work. It is therefore vital that we look at solutions from both the family and the company perspective. Below different support structures have been identified according to family and work, that can help an employee curb family-work conflict.

2.3.5.1 Support of Family

We will first look at family support structures. This is because as mentioned above companies have researched conventional support structures to ensure employees are well rested. We look at family support structures like the family role is the reason employee's face family-work conflict. Therefore family life is where our solutions should start. It is vital for families to be supportive as income is the main reason most individuals enter the job market (Albelda, 1999). According to De Sousa (2013), in order to combat family-work conflict, the family must have the following in place to reduce family- work conflict: Proper support structures, a division of labor among those individuals in the household and the support of extended family.

2.3.5.1.1 Support structures

It is essential for an individual to have proper support structures at home in order for them to be productive at work. According to Ahmad (2010), family support structures are less structured than company support structures. Admad (2010) identifies the following as support structures at home: Spousal support of job choice, caregiver for the home, schooling, and daycare for children.

Firstly, it is vital that a spouse be supportive of a job choice, working hours and working schedules, a supportive spouse makes the transition from resting during

the day to working at night more comfortable. This reduces family-work conflict (Admad, 2010).

Caregiver at home means the individuals home is looked after; most employees have housekeepers to clean up the house or look after the children (Bateman, 2006). This gives a night shift employee more time to rest and peace of mind that the home and children are looked after, reducing family-work conflict (Admad, 2010).

Children in school with aftercare also reduces family-work conflict as working parents do not have to worry about the safety and care of children while at work or resting (Bateman, 2006 & Admad, 2010).

Ammons & Edgell (2007), go on to add that religion should be considered a support structure as well. A home that includes religion helps the family find peace, are understanding and deliberate in their actions to be supportive.

2.3.5.1.2 Division of Labour

According to Burgess (1997), a modern father is one who can perform both tasks of a male and female role. Burgess (1997) states that since females are entering the workforce and creating a career for themselves, men should automatically evolve to be able to look after the home and kids. Gender Roles have dictated that women should look after the home and children and males should take care of the financial burdens of the family (Demerouti & Dollard, 2008). However the family dynamics do not work this way as more females join the workforce, gender roles become distorted. According to Abele (2003) family roles in today's environment need to have both the male and female sharing responsibilities in order for both of them to gain satisfaction from a career and family life.

2.3.5.1.3 Support of extended family

In South Africa, family dynamics are changing; some households are run by one working parent with no spousal support, which means that it is that parents sole responsibility to look after children, the home and financial burdens of the

household (Abele, 2003). In cases like this support of extended family members is crucial for an employee to be able to efficiently function both at work and at home (Bateman, 2006). In some cases, working parents are responsible for looking after extended family member financially, in these cases, it is essential that extended family members share responsibility for the family and home.

2.3.5.2 Support of the company

Support structures in companies are more structured than those of family support structures as they are often dictated by company policies or government employment legislation. According to Health and Safety Authority (HSA, 2012), the following supportive functions can help curb the interference of family on working hours: Good Support structures and systems in place, monitoring of working hours by supervisors and managers, the introduction of a rest period during working hours and training and development.

2.3.5.2.1 Support structures

Companies can offer employees a range of different support structures (HSA, 2012)

- a) *Wellness programs*- are a company's main support structure offering employee financial advice, psychological support, coping advice, relationship building and general wellbeing advice for both the employee and family members.
- b) *Child care facilities*- some companies offer their employees childcare options in order for employees to have peace of mind that their children are okay while they are at work.
- c) *Transport options*- Offering staff transport to get to and from work
- d) *Family responsibility leave*- Leave offered to staff in addition to annual and sick leave, used solely to aid an employee's family situation.
- e) *Paid maternity leave*- in South Africa employees can enjoy the benefit of maternity leave for four months (LRA, 1995). However, most companies do not offer paid maternity leave, which forces new mothers to come back to

work as soon as they possibly can rather than spending time with their newborn. Some companies do offer paid maternity leave for four months allowing mothers to spend more time at home with their children.

2.3.5.2.2 Monitoring of shift hours and working hours

In the healthcare industry, employees use a clocking system which help manager control their staff's times (HSA, 2012). This ensure staff are at work on time and are not leaving early. However, managers can monitor the staff activities during the night shift as they are not present at this time. It is vital to ensure a night supervisor is onsite to ensure employees are at work and performing their duties (HSA, 2012).

Employment legislation (LRA, 1995) also dictates how shift employees should work and the amount of time they should be on duty, for example, a shift employee should be a work for a maximum of 12 hours per a shift. Company policies and scheduling dictate the number of days an employee will be on or off shift. According to HSA (2012), employees should never be on the permanent night shift as it affects their body functioning.

2.3.5.2.3 Introduction of rest periods at work

Sleeping on duty is frowned upon to the extent that employees can be dismissed for doing so. Sleeping on duty in the healthcare industry is considered gross negligence (LRA, 1995). These are due to patients not receiving nursing care. However, studies have shown productivity can be increased by nurses having a power nap (Alspach, 2008). These power naps also decrease mistakes and increase response to situations. According to HSA (2012), rest periods should be taken for a short period many times through the night to reduce fatigue. However, Alspach (2008) states that employees should have at least a 1-hour nap for them to be productive. HSA (2012), states that naps need to be monitored closely and should not be for more than 20 minutes as employees still need time to freshen up and regain alertness.

2.3.5.2.4 Training and development

According to HSA (2012), night duty employees often are neglected when it comes to training, as most training is done during the day. Training during the day means staff will now have to cut into their family time to come to work to attend training; this increase work-family conflict as work is interfering with family time. Kerin & Dawson (2004) state that training for night shift employees should occur during their night shift.

2.3.6 Performance

Employee productivity is the measure of the efficiency of a worker or group of workers (Kerin & Dawson, 2004). According to research, a nurses' productivity should be measured by the hours of nursing care they provide per a patient (De Sousa, 2013). However, other researchers argue this point as the amount of skill nurses show will also affect the level of care they give to a patient. Nurses make up the largest single group of healthcare workers in hospitals and absorb a high proportion of the total budget. As a result, it is no surprise that Health Care Facilities look at productivity and efficiency of their nursing resources. With this information, managers can make decisions regarding allocation of staff and activities, thereby increasing efficiency and effectiveness of personnel.

Every organization should evaluate and monitor their employee's performance as this is one way to ensure positive performance. In the healthcare industry, an under-performing employee has severe implications for the business and patient care; it is therefore in the best that the company to ensures continuous checks are done on performance. Performance should be done on an on-going base and should evaluate all areas of individual achievements and work ethic. It is also in the company's interest to monitor performance as it could point out an underlying problem with the company culture. According to Folkard & Tucker (2003) and Kerin & Dawson (2004) to monitor performance a company would have to monitor the following seven traits of their employees.

2.3.6.1 Punctuality

Employees that frequently are late for work or are absence indicators a problem. Employees who experience family-work conflict often have excuses as to why they have come in late or must leave early or for them needing a leave of absence (Folkard & Tucker, 2003). It is valuable to ascertain the actual reason for these excuses, apart from family-work conflict, other reason may include, not adapting to working hours, bad relationships with other employees, not enough training or the need for rest (Kerin & Dawson, 2004).

2.3.6.2 Quality of work

According to Kerin & Dawson (2004), the completion of tasks timeously, performing projects of high quality and endless praises from the client (patients) is a good indicator that employees work is of a high-quality standard. Most companies perform a joint performance conversation on a bi-yearly base. It is crucial that these discussions take place to ascertain how the employee is performing and plan a way forward for under-achieving employees.

2.3.6.3 Observe personal habits

Perceived bad habits could hinder an employee's performance at work- this includes office gossip, unauthorized breaks, disruptive behaviour, use of company time for personal reasons, lying and excuses (Folkard & Tucker, 2003). Of interest, an employee experiencing great family-work conflict would possess a number of these traits, for example, the use of company time to perform personal errands or to be on telephone calls with the family while at work.

2.3.6.4 Attitude check

Bad attitudes manifest itself in insubordination (Folkard & Tucker, 2003). These individuals would not comply with company policies and would disrespect co-workers, supervisors, and managers. These employees will also not follow company rules and regulations. For example, sleeping on duty knowing that this

behaviour is unacceptable by the company or not taking care of patients due to lack of interest.

2.3.6.5 Personal presentation

Most companies have a professional dress code to ensure that the company has a professional look seen by patients and clients (Kerin & Dawson, 2004). An individual who portrays a disrespect for personal presentation reflects poorly on the company. A well-dressed employee shows that the employee that's pride not only for her or himself but has respect for the company.

2.3.6.6 Patient survey

If an employee is performing poorly, it will manifest itself in customer service (Folkard & Tucker, 2003). Client (patient) surveys will help identify how an employee is treating their patients and if their performance is effective in delivering quality care to patients. A positive response from patients means the employee is performing his or her duties well. However, if the experience is neglectful or displeasing, it is worth investigating the employee's behaviour or the incident. Employees do not perform at 100% every day, but it is necessary to investigate an employee who receives continuous bad reviews from patients (Folkard & Tucker, 2003).

2.3.6.7 Random Checks

Depending on the business nature it is worth noting that random checks on employees may be beneficial to identifying how they perform. This ensures the quality of the work they perform (Folkard & Tucker, 2003). While employees are maybe aware of policies and procedures, random checks may help to ensure work is of quality and is done consistently.

It is not also easy to monitor an employee's performance, but if done correctly, monitoring can help raise the standards of the organization, the quality of the work outlined and the improved performance of staff.

2.4 Research Gaps

After extensive research into Family-work conflict on night shift employees the following gaps in research was found:

2.4.1 Work-Family conflict, not Family-work Conflict

Numerous articles were found on work-family conflict and not family- work conflict. The effects on work on family life have been extensively researched making information readily accessible. Employees work schedules, flexible work hours, spending more time at work than with family and taking work home are some of the topics discussed in detail. However, very little is known about how family roles affect work life. For a shift worker, how their time is spent between family and work is crucial as it affects patients' lives, work performance, and the overall profitability of a hospital. More research on this topic is therefore needed.

2.4.2 What are shift employees doing during the day

Shift work is researched significantly primarily when it comes to how shifts should be scheduled to enough employees are getting enough rest. According to research, most employees enjoy shift work because it gives them time off to spend with their families. Companies take into consideration research and government legislation when scheduling night shift employees to ensure adequate rest level are achieved to perform their jobs. No matter how much consideration is put into ensuring scheduling is efficiently done to ensure staff has enough time to rest, very little is known about what an employee does on their "on shift" time to rest. Research shows that employees find it difficult to manage their time during their "on shift" schedules between family and work. Although companies are giving employees enough time off to rest, rest is still required on days when they are expected at work as well.

2.4.3 Support structures at home and work

Due to research mainly being done on work-family conflict, support structures in a working environment has been researched. Ways in which the company can help curb the interference of work in the family life has been investigated extensively. This could be topics like flexible hours, working from home, reduction of shifts and time off to ensure employees have time with their family. However, very little is done when researching how a family can support an employee. More research on how a family can support an employee's job choice and therefore ease the burden of family-work conflict.

2.5 Summary

The difference between work-family conflict and family-work conflict has been identified. Work-family conflict is the interference of work on family life, whereas family-work conflict is the interference of family life on work. Very little research has been done explaining how family life affects work roles. However, through role conflict, we can identify possible ways in which family roles interfere with work roles. Role conflict is caused by time-based conflict, strain-based conflict, and behaviour-based conflict. Each of these factors adds to the bases of this research in identifying possible factors that contribute to family-work conflict. These factors include biographic information such as gender, age, number of children and the age of children. Other factors have been identified to contribute to family-work conflicts, such as rest time, looking after extended family and support structures both at home and in the workplace.

Possible solutions have been identified in support structures stemming from the home environment and the workplace. This includes both supportive structures from family and from the company.

Ways to monitor performance have also been identified, ensuring employers can identify poor performing employees. Folkard & Tucker (2003) and Kerin & Dawson (2004) identify seven ways in which to monitor performance.

In concluding this chapter, it is evident that further research is needed on this topic as it poses a challenge for companies, employees, and patients.

Chapter Three

Research Methodology

3.1 Introduction

Research has been defined by:

Abrahams (2011:1) as “an organized, structured and purposeful investigation, aimed at revising, discovering and interpreting human knowledge on diverse aspects of the world by someone first hand.”

Sekaran and Bougie (2010) as a systematic and organized effort to examine a specific problem that requires a solution.

Therefore, from these definitions, a series of steps need to be followed. This chapter, thus, examines the purpose of the study, research strategies, population and sampling, validity and reliability, data collection methods and the questionnaire. Also, this section identifies and explores the critical areas that need to be considered when undertaking research.

3.2 Purpose of the study

Shajahan (2005:2) states that “for operational and planning problems of the industry or business to be solved, research is the most useful tool.” Bless, Higson-Smith, and Sithole (2013:1), stating that “for society to progress and new knowledge generated about the world, one needs to ask questions to seek better understanding about our environment and ourselves.”

There have been many research studies on work-life balance and work-family conflict. However, very little research has been done on family work conflict. This study aims to identify the factors that contribute to family work conflict and if this inhibits performance, and if so, to determine how it does and what the possible solutions would be to this problem. The research questions set out to address this purpose through the numerous questions in the questionnaire.

3.3 Research approach

A research approach is a systematic plan of action used to undertake a research study and is concerned with the totality of the study process (Wilson, 2010). Setting out a plan specifying the methods and procedures for analyzing and collecting information enables the researcher to address the research questions as objectively as possible (Wilson, 2010:104).

The two broad approaches to research are the inductive and deductive paradigm. According to Saunders et al., (2016:51), an inductive approach is a data-driven approach and is a method in which the topic explored, and a theory developed as data is collected and analyzed. A deductive approach is theory-driven, in which the researcher wishes to adopt a clear theoretical position that is tested through the collection of data (Saunders et al., 2016). The author states further that a deductive approach encompasses the use of existing theory rather than the creation of new theories. Therefore, the deductive approach will be used do to the investigation into current solutions to increase productivity and its effectiveness in address the productiveness of night shift employees.

3.4 Research strategies

There is two primary research strategies- Quantitive and Qualitative research. However, a third research strategy has become popular in recent years- known as Mixed methods (Saunders et al., 2016:164). Mixed Methods takes aspects of both quantitative and qualitative research (Wilson, 2010). Quantitative and Qualitative research represent different ends of a continuum, whereas Mixed methods reside in the center (Creswell, 2014:3). Below these research strategies, are discussed further.

3.4.1 Quantitative Research

This research approach uses numbers and statistics. Creswell (2014), states that quantitative research achieved through structured methods, namely closed-ended questionnaires, a structured interview or schedule. A drawback of this design can be the lack of depth from the research findings, regarding emotions and feelings

(Saunders et al., 2016). However, according to Creswell (2014:4), this approach allows you to collect and analyze more information. It also allows for the testing of theories by analyzing the relationship between variables. These variables can be measured so that number data can be analyzed statically based on the instrument. However, this means that excellent statistical knowledge is needed to analyze data efficiently (The University of Northampton, 2016). Descriptive statistics are an efficient way of presenting data and describing the sample, but inferential statistics are needed to explain the hypotheses in the population (Bless et al., 2013). According to Wilson (2010), quantitative studies draw on representative samples in which the results can be generalized to the applied population.

The current study included a closed-ended or semi-structured questionnaire. Descriptive and inferential statistics are used to analyze data gathered from the study. The closed-ended questions consisted of numerical choices, and a Likert scale format. Bless et al. (2013), point out that these types of questions able to be answered without difficulty and precisely whereas, open-ended questions are used to get answers from respondents by allowing them the flexibility to answer a question in the way they liked. For example, in the questionnaire respondents were asked how many hours of sleep did the have during the day. The use of a few open-ended questions allowed for the researcher to get more information, however, the answers stemming from these questions are numerical and therefore are not as time-consuming as that of worded answers to open-ended questions. The nature of the study dictated using a quantitative approach.

3.4.2 Qualitative research

This type of research is a subjective process that cannot be experientially measured by frequency or quantity and is a process concerned with subject, procedures, and meanings (Wilson, 2010:13). Qualitative data makes use of words, feelings, thoughts, behaviors, and opinions. The main advantage of using this study is the amount of detail gained from a group of people or case (The University of Northampton, 2016). However, Creswell (2016), states that with this type of research the analysis of data is time-consuming and general statements about data are subjective. According to Bless et al. (2013:339), in using this method, researchers are interested in how people experience themselves, their

relationships and their world, this is done through not only looking for what happens but seeks to understand the reasons behind this.

3.4.3 Mixed methods

Mixed method is an integration of both qualitative and quantitative data, and the use of distinct designs that incorporate theoretical frameworks and philosophical assumptions (Creswell, 2014: 4). By using this method, the assumption is that the researcher is provided with a complete understanding of the research questions compared to using either qualitative or quantitative method in isolation (Wilson, 2010). According to The University of Northampton (2016), mixed methods might not always be the smartest choice for research as it takes time to analyze both quantitative and qualitative data. However, this type of research strategy is beneficially in multi-stage research or to triangulate data (Saunders et al., 2016).

3.4.4 Quantitative versus qualitative versus mixed method research approaches

	Quantitative	Mixed method	Qualitative
Scientific Method	Deductive	Deductive and Inductive	Inductive
Research Objective	Description, Explanatory, Predictive	Multiple objectives	Descriptive, exploratory, discovery
Nature of Reality	Objective	Common sense, realism, Pragmatic	Subjective, Socially Constructed
Forms of Data collection	Structured instruments	Multiple forms	Open ended, interviews, Observations
View of Human Behaviour	Regular and Predictive	Behaviour is somewhat predictable	Dynamic, Contextual, Fluid
Report Structure	Statistical	Pragmatic	Narrative

Table 3.1. Comparison of Research Strategies

(Source: Adaption from Creswell, 2014; Saunders et al., 2016; Bless et al., 2013; and The University of Northampton, 2016).

The commonality among these approaches is “the deductive testing of theories, building protection against bias, controlling for alternative explanations and being able to generalize and replicate findings” (Creswell, 2014). However, according to Bless et al. (2013:58), each research strategy has its advantages and

disadvantages, an excellent researcher carefully selects the correct research strategy in light of the particular problem.

By keeping in mind that numerous questions that needed answering about the twenty-four hours life of a night shift employee, their family and their job; and the need to answer questions quickly due to the participants answering the questionnaire during working time, affecting patient care. The researcher has selected a quantitative research strategy which allowed for these numerous questions, a selected sample size which is representative of the population and the use of a closed-ended questionnaire.

3.5 Research design

According to Shajahan (2005), research design is a master plan specifying the methods and procedures for collecting and analysing the needed information. As pointed out by Welman, Kruger, and Mitchell, (2005), research design is a blueprint or plan indicating how research will be conducted. Research designs, according to Creswell (2014), are types of inquiries within mixed methods, qualitative and quantitative approaches that provide. Creswell (2014:13) states there are two designs associated with quantitative research:

Experimental research- use to determine if a specific treatment affects the outcome. For example, in relation to this study, allowing half of the sample to sleep for an hour during their shift and the other half to stay awake to see if this affects their performance.

Survey research- provides numeric or quantitative description attitudes, trends or opinions of population based on a sample of the population. This study is a survey research design as a sample of the population has been given the questionnaire to determine their attitudes towards work-family conflict and performance.

3.5.1 Population and sampling

A population is a group of people in which the research identifies to draw conclusions for the study (Babbie, 2013:119). Bryman (2008:698) defines

sampling as being a segment of the population selected for research. The sample selected from the population must be representative, i.e. Be able to reflect the findings of the population at large to generalize the results (Bryman, 2008). Saunders et al. (2016:275) describe two types of sampling, probability, and non-probability sampling:

Probability sampling- also known as random sampling, the sample is selected by 'probability' or 'chance' or random selection. People have an equal probability of being included in the study and results can be generalized to the population.

Non-probability sampling- also referred to as non-random sampling. The researcher purposefully selects people from the population to be included in the sample. The probability of being included is unknown.

For this study, the sample has was selected through stratified random sampling. According to Creswell (2014), it is vital to use stratification before selecting a sample to ensure the sample reflects the population. Stratified random sampling was essential to ensure that all departments and ranking of nurses are included in the study.

3.5.2 Population and sample size

When conducting research, it is impractical to select the entire study population for the following reasons (Saunders et al., 2016:272):

- Time constraints prevent surveying the entire population
- It is impractical
- Budget constraints
- Data and result are needed quickly

According to Katzenellenbogen, Joubert, & Abdool Karim (2001:80), small sample size can yield inconclusive results compared to a large sample size which would yield more reliable and stable results.

The sample size is often dictated by the margin of error that is tolerated; the total size of the population; the 'confidence' one requires of the data; and the types of

analysis take needs is conducted (Saunders et al., 2016). A sample size of 52 has determined based on a population of 76 Night duty nurses at the healthcare facility, a confidence level of 95% and a 5% margin of error (UKZN, 2016).

3.6 Research instrument

According to Katzenellenbogen et al. (2001), the most commonly used instruments are questionnaires, interviews, and observations. A simple questionnaire was developed and presented in Appendix 1.

The following are advantages of using a questionnaire (Babbie, 2013):

- 1) Participants are in proximity to each other and respondents can be easily assembled
- 2) Least expensive means of gathering data
- 3) Greater sense of anonymity and an opportunity to gather their thoughts before answering

However, Questionnaires also have disadvantages (Welman et al., 2005):

- 1) Respondents may have difficulty reading and writing, making it difficult to respond to questionnaires
- 2) Organizations are often not willing to let questionnaires be completed during company time
- 3) This process does not allow for the research to correct misunderstandings or answer questions respondents may have

In this study, the research self-administered questionnaires to the nursing staff and was on site to answer any questions they may have.

3.6.1 Questionnaire design

According to Sekaran and Bougie (2013:147), a questionnaire is a preformulated written set of questions. The questions are developed from literature researched on night duty nurses, family work conflict, and productivity. The questionnaire followed a 24-hour life cycle of a night duty employee, starting from the time they

go home from their shift and ending with them being back on duty. Activities and support structured are questioned throughout the 24-hour cycle. The questionnaire had to be constructed merely due to the educational levels of the respondents. A Likert scale was used, in which respondents had to choose between, Agree, disagree and Neutral responses. A few questions gave respondents numerical choices. Closed-ended questions were used due to them being easy to process, low cost to analysis and requiring very little time to be completed (Gray, 2014:365). Sekaran and Bougie (2013), also refers to the disadvantages of closed-ended questions, stating that these questions can sometimes be crude, there is a loss in spontaneity in response and respondents may answer in a biased manner.

The questionnaires were pre-coded as to facilitate data input on the return of the questionnaire. Permission to conduct research had been obtained from the health care facility and ethical clearance from the Research Ethics Committee of the University of Kwa-Zulu Natal (Appendix 2) before administering the questionnaire.

Respondents received a questionnaire (Appendix 1); assurance of confidentiality both verbally and through; and was informed that their participation is voluntary both verbally and through Appendix 1.

3.7 Pilot Test

Pretesting involves the administering of the instrument before giving the questionnaire to the actual sample to determine if any inadequacies occur (Saunders et al., 2016). The pre-test was given to 10-night duty employees in a similar facility to rectify any anomalies that appeared. Before administering an instrument, pre-tests need to be done to ensure that the respondent understands questions, it is also crucial that the questionnaire is administered to a test sample with the same profile to get the best outcome of the pre-test (Sekaran and Bougie, 2013:158). From the evidence, later discussed in section 3.9) that the pre-test sample respondents had no problem understanding the research instrument.

3.8 Validity and reliability

According to Saunders et al. (2016:202), Reliability and validity are central to the acknowledgment of the quality of the research; these two constructs are essential for measuring and defining distortion and bias. Bless et al. (2013: 222) states that validity and reliability are crucial for research instruments to ensure the data collected is both, reliable and valid. Reliability directly impacts validity; a study cannot be valid unless it is reliable; it must be both reliable and valid for the study to be viewed as an accurate representation (Bless et al., 2013).

3.8.1 Validity

Validity represents the trustworthiness and accuracy of the research, data and the instrument (Bernard, 2011). According to Kumar (2005:153), Validity is “the degree to which the researcher has measured what he has set out to measure.”

Validity can fall into the following three classifications (Kumar, 2005:154):

Construct Validity- refers to a measure that may be valid in one population but differ in another.

Face or Content Validity- refers to the extent to which the question makes sense, and the measure needs to include all aspects of the variable.

Concurrent or Predictive Validity- the findings of the study must be evaluated against the most valid measure available and that the measure confirms a known or theoretical hypothesized association.

Two forms of validity are especially significant for research design and instrument, namely, construct validity and concurrent or predictive validity. Pretesting a research instrument is a knowing way of ensuring validity as conducted in this research study. To ensure and increase the trustworthiness of the instrument, the researcher used respondent validation as a tool (Bless et al., 2013). For this, the researcher spoke to test subjects from the pre-test to ensure questions were understood and to gain more insight on the administration of the questionnaire.

3.8.2 Reliability

Bless et al. (2013: 222) defines reliability as the “consistency of a measure, and in most cases, this reliability of a measure is the degree to which the instrument produces the same results for recurrent trails.” In the present study, it is possible that the administration of questionnaires may have a similar outcome, but without repeating the study, there is no way of this being certain. According to Sutherland (2006:47), “to determine whether research is reliable or not, one needs to consider the different threats to reliability including Participant error, participant bias, observer error, and observer bias. From the results obtained it was apparent that the respondents answered the same despite being from different departments, this shows the consistency and reliability of the research.

3.9 Data collection procedure

After the pre-test, a list of night duty employees had been obtained from the Human Resources department. In ensuring the sample size was an accurate reflection of the stratum, the researcher applied stratified random sampling. With the general wards, every 4th respondent had been chosen from the list. In the specialized wards, like ICU and High Care, the population was much smaller, and therefore every 2nd respondent had been selected.

Before sending out, the questionnaire ethical clearance had been obtained from the university, and a letter was sent to the company outlining the reason for the research and to seek permission to administer the questionnaires. Permission was granted, and questionnaires were administered to the employees according to the listing. Respondents have been informed off their rights in participating in the study and that their responses were confidential.

The questionnaire was printed, and employees were handed the questionnaire in one night to complete, and responses were collected on the same night. Administering questionnaires in this manner helped in ensuring a high response rate. The questionnaire was dispensed to a total of 52 respondents, a response rate of 81% was achieved. A response rate of 50% is sufficient for reporting and analysis, a response of 60% is good, while a response rate of 70% or more is

excellent (Babbie, 2013). Babbie (2013) also stated that surveys administered to respondents are more likely to receive a higher response rate than those administered online.

3.10 Data analysis

According to Cooper and Schindler (2008), data obtained through interviews, questionnaires, observations or secondary sources must be analysed for deductions to be made. This entails the reduction of data collected and compiling data into a convenient size to develop summaries and developing patterns from data collected using statistical methods. Upon completion of the survey, the questionnaires were captured in a Statistical Package for the Social Science (SPSS) Version 22, a statistical software package that allows data to be manipulated for sufficient analysis.

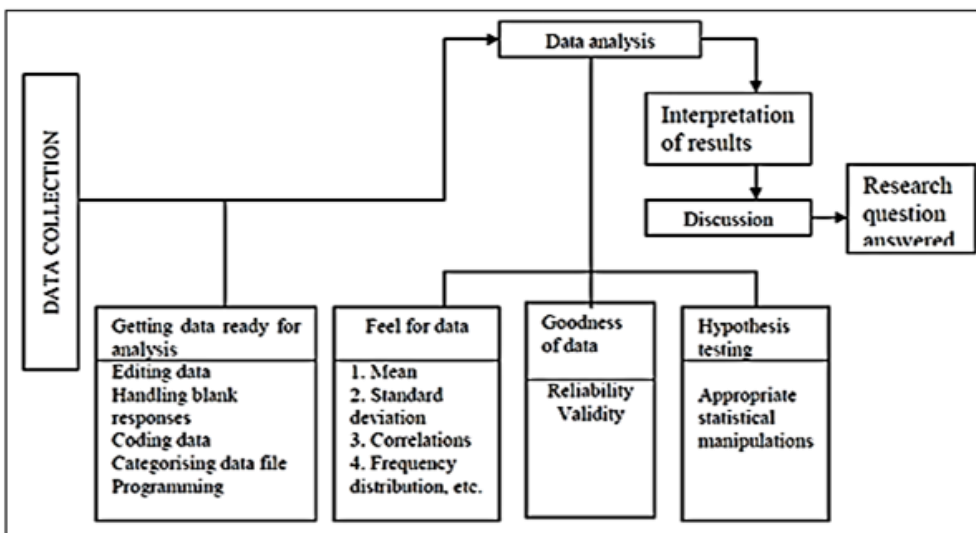


Figure 3.1: A Typical Flow Diagram of Data Analysis Process

(Source: Adapted from Sekarn & Bougie, 2013).

According to Sekarn & Bougie (2013), there are three primary objectives in data analysis:

- Getting a feel for the data
- Testing the goodness of the data: and
- Testing the hypothesis for the research

3.10.1 Getting Data ready for Analysis

- According to Hanuman (2006:65), the preparation of data should be handled in the following manner:
- *Editing Data*- The researcher should follow up with the respondent to ensure all relevant data is completed; this should be done with both questionnaires and interviews.
- *Handling blank responses*- not all respondents will answer all the questions; if 25% of the items are not answered, the questionnaire should not be included in the datasheet. Blank responses can be handled by assigning a midpoint scale or by assigning the mean value. By ignoring blank responses, the population size will be reduced.
- *Coding*- The responses must be coded to be entered into the SPSS system
- *Categorisation*- Variables had to be categorized to facilitate several items measuring a particular concept being grouped together
- *Entering of Data*- Data then had to be manually entered into the SPSS system

Hanuman (2006:80) states that statistics is the most valuable tool for a researcher in analyzing data. Descriptive statistics is the method of summarising data in the form of graphs, numbers, averages, and percentages (Sekaran & Bougie, 2013 282). Inferential statistics refers to methods of making predictions about a population based on data collected from a sample of a population (Sekaran & Bougie, 2013). In this study, both descriptive and Inferential statistics were used.

3.10.2 Descriptive statistics

In this study, the researcher used descriptive statistics to analyze the data through SPSS to identify patterns and valuable information identified by the data collected. Data was represented in the form of tables and charts. Graphs, frequencies, and plots charts were used in this research.

According to Sweeney, Williams & Anderson (2009), the following are descriptive statistics:

a) Measures of Central Tendency:

Mean- important measure of location, or average value of the variable and provides a measure of central location for the data

Mode- the value that occurs with the maximum frequency

Median- the midpoint score, when data is ranged from highest to lowest

b) Measures of Variability:

Standard Deviation- indicates how values vary about the mean of the distribution and is defined as the square root of the variance

Variance- is the sum of the squared deviations about the mean divided by the total number of values

Range- is the difference between the smallest and largest observations

c) Measures of Relationships:

Is the correlation between variables and is used to determine the nature of the relationship between variables?

Contingency tables- used to show the relationship between nominal data through cross tabulation

Scatter Plots- displays the form, direction, and strength of the relationship between variables

Correlation Coefficients- statistics that express the magnitude of the relationship between two variables

d) Frequency Distribution:

Is the summary of data in a table format showing the number of items in each of several overlapping classes

e) Simple Descriptive Statistics:

Ratios-expresses the relative frequency of A in relation to B

Proportions- Are parts of a whole, and are calculated by dividing by the total number

Percentages- are number parts of 100 that a specific portion represents

3.10.3 Inferential Statistics

The research used inferential statistics to determine if data collected can be generalized to the population (Gary, 2014). Data were analyzed using SPSS. Chi-Square tests and cross tabulation were used to examine the relationship that existed between variables.

According to Gray (2014), inferential statistics can be divided into parametric and non-parametric statistic tests:

a) Parametric Statistics:

T-test- used to compare means of two groups to determine if the differences between the two means are significant

Analysis of Variance- determines if the two or more means deviate from one another significantly or by chance

b) Non- Parametric Statistics:

Chi-Square test- to establish if a relationship exists between two nominal variables or if they are independent. The chi-square test is used to determine if the observed pattern is due to chance.

Cross-tabulation- used as a statistical tool to analyze categorical variables or data collected during the research process.

3.11 Ethical Considerations

The research has taken the following precautions in conducting this research to ensure ethical considerations:

- 1) Participants were not forced to participate and were not harmed during the study. Researcher has received written informed consent from participants stating their consent to participate in the study and that they have the right to withdraw from the study at any time (Appendix 1).
- 2) Participants have been informed verbally that their personal details will remain confidential and only findings from the studies will be shared. Only

research findings and biographically details have been used, participants names was not included in data reviewing to ensure anonymity and confidentiality

- 3) Full consent was obtained from the participants confirm that they understood the research study (Appendix 1).
- 4) The researcher is not affiliated with any other body except the University of Kwa-Zulu Natal with regards to this research project and is not receiving any funding on this research

3.12 Summary

Chapter three highlighted the research methodology used in this research. The research design selected was explained the motivation for the specific design was highlighted. The sampling techniques were identified and explained how the sampling was conducted analyzed. Night shift nurses were selected depending on the departments in which they worked. Printed questionnaires were administered and collected in one night in improving the response rate. Details regarding the validity and reliability of the study were also explained. Statistical methods were explained, and decisions on the type of statistics used were identified.

Chapter Four

Presentation of results

4.1 Introduction

This chapter depicts the results collected from the questionnaire survey completed by a sample population at the private the healthcare facility. Fifty-nine questionnaires were handed to employees in the different departments and off different ranks. Forty-two questionnaires have been completed, and a response rate of 80.76% was achieved, this percentage will be used as a rounded off figure of 81% in the subsequent chapters. As discussed in the preceding chapter data was analysed using SPSS.

The results will be presented in five sections. The first section will represent the demographics of the sample; the second section will look at the 24-hour day of the night duty employee; Section three will focus on their family life; the fourth section will look at the job and performance, and the final section will look at the inferential statistics.

4.2. Section1: Demographics

This section of the questionnaire was created to gain background information on the respondents. Question1 to 9 requested information on gender, race, age, marital status, number of children, youngest child's age, department, and rank. This information was vital in determining the correlation between the variables and family-work conflict.

4.2.1 Gender

Participants were required to indicate their gender. This question was asked to provide better insight on Genders relationship to family-work conflict. Results in Figure 4.1 shows that most of the respondents were female, 33 (79%) compared to the 9 (21%) male respondents.

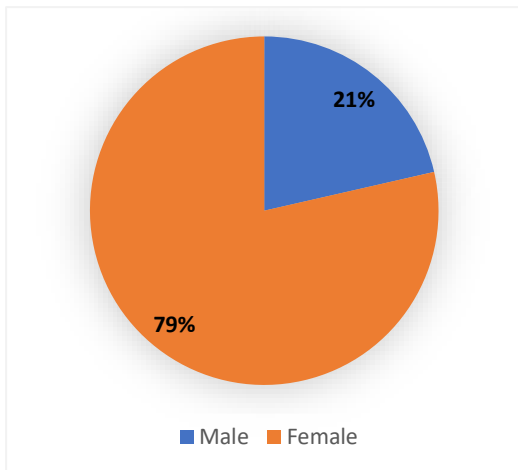


Figure 4.1: Gender distribution of respondents (n: 42)

4.2.2 Race

Respondent's race was indicated to provide a better understanding of the respondents of the study. This was also used to see if there was a relationship between the respondent's race and family-work conflict. The results in figure 4.2 below show that the sample was made up of 43% African, 30% Indian, 9% white and 9% Coloured respondents.

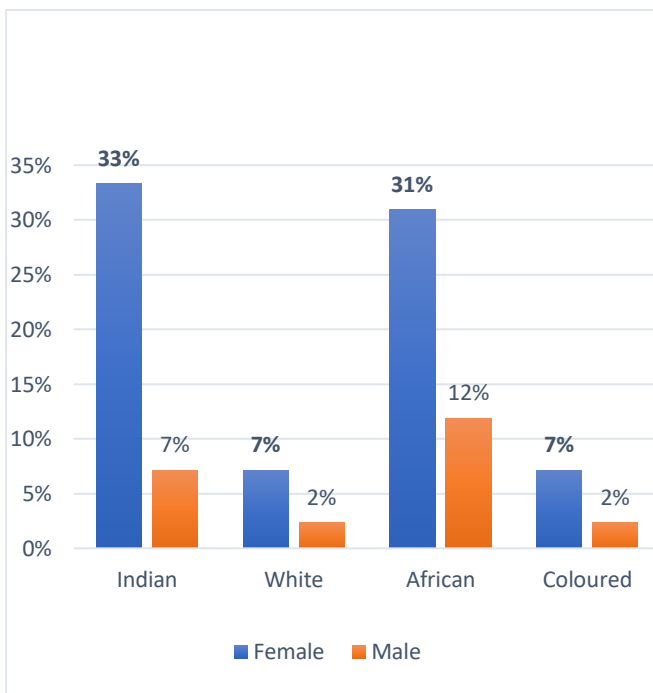


Figure 4.2: Race Distribution of respondents (n: 42)

4.2.3 Age

Respondents were asked to indicate their age. It was essential to establish their age to ascertain if family-work conflict impacted a specific age group. The researcher then categorized the ages indicated in age categories. Figure 4.3 indicated the age of respondents. Results show that most respondents fall into the age categories of 31 to 40 years (49%) with the second highest age category being that of 20 to 30 years (32%). 51 and above employees made up 7% of the sample the age group 41 to 50 made up 12% of the sample.

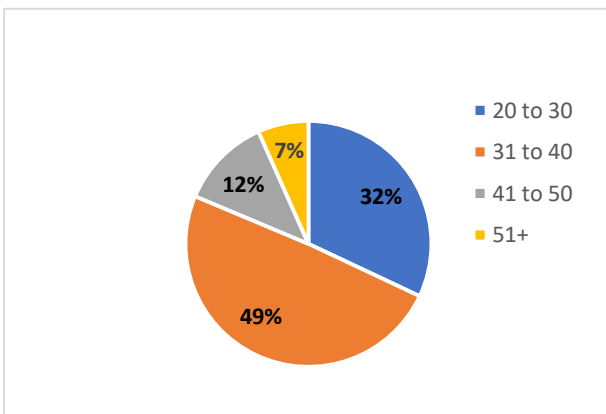


Figure 4.3: Age of respondents (n: 42)

4.2.4 Marital Status

Respondents were asked to indicate their marital status as this could be a contributing factor to Family-work conflict. Of the 42 respondents, 52% were married, and 48% were not married.

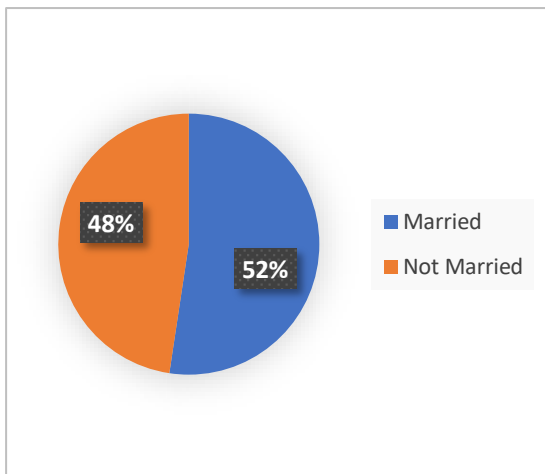


Figure 4.4: Marital status of respondents (n: 42)

4.2.5 Children

The number of children and the age of their children could also impact Family-work conflict. Respondents were asked to indicate the number of children they had and to indicate the youngest child's age.

From the survey, 21% of the respondents did not have any children. 38% of the respondents had two children, 24% had one child, and 17% had three or more children.

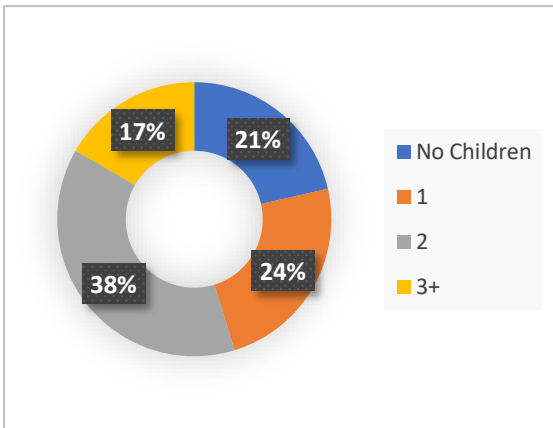


Figure 4.5: Number of children (n: 42)

According to the results, 48% of the respondents had a child between the ages of 1 to 10 years. 14% of the respondent had a child between the ages of 11 to 17, 5% of the respondent had a child between the ages of 18 to 24 years and 12% of the respondent had children 25 years and older. 21% as mentioned above did not have children.

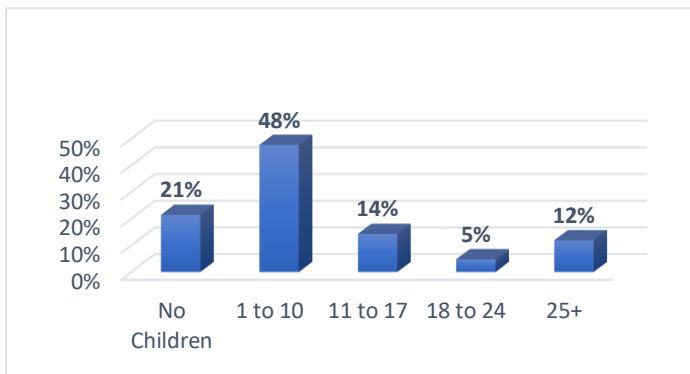


Figure 4.6: Youngest child's age (n: 42)

4.2.6 Rank

The rank of the respondents' is vital as they differ in responsibilities and tasks. The absence of a Registered nurse (RN) or the nurse-in-charge means there is no supervision of staff and patients (as discussed in chapter 2). The absence of Enrolled nurse auxiliary (ENA) means there will be a shortage of compassionate care given to patients (as discussed in chapter 2), while the absence of an Enrolled Nurse (EN) means there will be a shortage of medical care and supervision of patients (as discussed in chapter 2). According to the responses, 48% of the respondent are Enrolled Nurses, while Registered Nurses and Enrolled Nurse Auxiliaries make up 26% each of the responses.

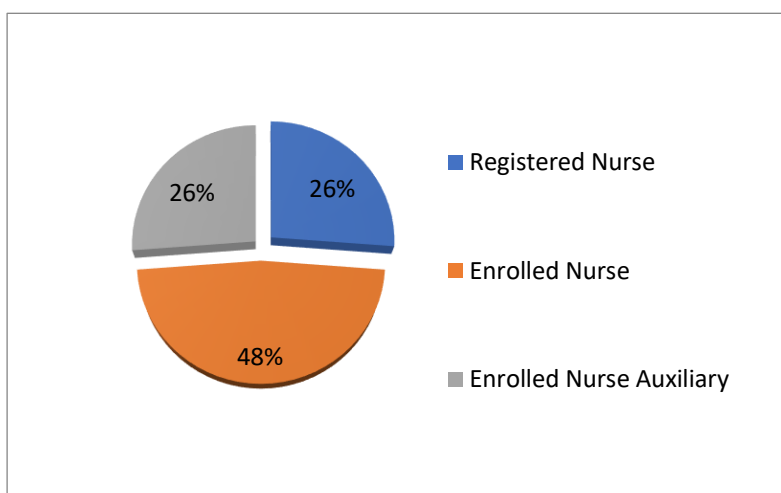


Figure 4.7: Ranking of respondents (n: 42)

4.2.7 Department

Nursing departments in the healthcare facility can be categorized into General wards, ICU's and High Care departments. In figure 4.8, 30 (71%) of the respondents belong to the general ward, 7 (17%) of them belong to ICU and 5 (12%) of the respondents belong to high care. Analysing the departments is essential as the need for patients care in these department differs; therefore, alertness and concentration of nursing staff is essential.

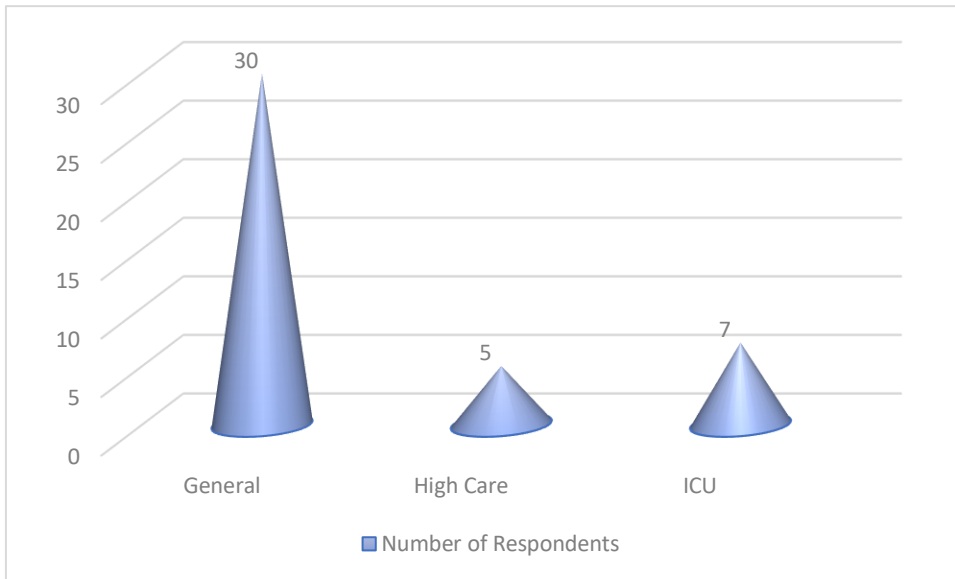


Figure 4.8: Departments of respondents (n: 42)

4.3 Section 2: 24 hours of a night duty employee

This section sets out to establish utilization of the night duty employee's 24 hours. Questions in this area is used to determine time spent on work, rest and family life.

4.3.1 When I go home from night shift.....

<u>When I go home from night shift.....</u>	<u>Agree</u>	<u>Neural</u>	<u>Disagree</u>	<u>N/A</u>
1) I am extremely tired	64	19	17	0
2) I go straight to sleep	38	14	48	0
3) I get my family ready for their day	57	14	29	0
4) I do all the household chores	57	24	19	0
5) I look after my children	33	7	38	21
6) My spouse/ family take care of the home so I can rest	38	24	38	0

Table 4.1: Respondents percentage results from questions in section “When I go home from night duty” (n: 42)

From table 4.1, 64% of the respondents are tired when they go home from night shift 19% are neutral, and 17% disagree. Only 38% go straight to sleep after their 12 hours night shift, while 48% do not. 57% of the respondents get their family ready for work when they get home from night shift. 38% look after their children

rather than sleeping or resting after their shift. 38% of the respondents have help from their family and spouse to look after the house, while 38% of the respondents disagree with them having any help with looking after the home.

4.3.2 During the day....

<u>During the day.....</u>	Agree	Neutral	Disagree	N/A
1) I prepare for when my family comes home	57	19	24	0
2) I rest	45	17	38	0
3) I look after my children	43	14	21	21
4) I look after my extended family	48	14	38	0
5) I have another job	24	14	62	0
6) I watch TV	45	21	33	0
7) I spend time with family and friends	67	14	19	0
8) I take time to enjoy my hobbies	38	12	50	0

Table 4.2: Respondents percentage results from questions in section “During the day” (n: 42)

Table 4.2 looks at employee activity during the day, after they have come home from work. It is critical to understand if they are getting the required resting period to efficiently perform at night. Of the 42 respondent, 57% prepares for when their family returns home from their day. 45% of them rest during the day. 43% and 48% of the staff look after their children or extended family respectively. 62% of the staff have day jobs. While 45%, 67% and 50% of staff take time to enjoy Television, time with friends and family or part take in hobbies.

4.3.3 While sleeping during the day...

According to table 4.3, 55% of staff have a good sleep during the day, while 67% can have a good rest. 48% of staff look after their homes and 33% of staff look after their children. While 43% of staff have difficulty sleeping, 19% cannot fall asleep, and 24% agree to take medication to aid their sleep.

According to Table 4.4 only 66% of staff sleep for more than 6 hours during the day before their shift starts. 34% of staff are getting 5 hours or less sleep during the day.

While sleeping during the day.....	Agree	Neutral	Disagree	N/A
1) I have the best sleep	55	19	26	0
2) I have a good rest	67	12	21	0
3) I find it difficult to sleep	43	26	31	0
4) I have to look after my home	48	10	43	0
5) I have to look after my children	33	2	50	14
6) I cannot fall asleep	19	31	50	0
7) I take medication to fall asleep	24	12	64	0
8) I have a problem falling asleep	45	0	55	0

Table 4.3: Respondents percentage results from questions in section “While sleeping during the day” (n: 42)

	Hours					
Percentage of Employee's	7%	17%	10%	26%	21%	19%
Hours Awake	9	8	7	6	5	4
Hours Asleep	3	4	5	6	7	8

Table 4.4: Respondents percentage results from questions in section “While sleeping during the day: How many hours sleep do you get” (n: 42)

4.3.4 Before I start my shift...

Before I start my night shift.....	Agree	Neutral	Disagree
1) I am fully rested	40	33	26
2) I have peace of mind	52	21	26
3) My family is well taken care off	52	26	21
4) I am ready for the night ahead	45	21	33
5) I am tired from the day	36	21	43
6) I am tired because I had to much to do during the day	52	17	31
7) I am tired because I find it difficult to sleep	43	19	38
8) I am stressed at the thought off going to work	29	17	55
9) I wish I could go to bed	38	21	40

Table 4.5: Respondents percentage results from questions in section “Before I start my shift” (n: 42)

According to Table 4.5, only 40% of staff feel rested, and 45% of staff feel they are ready for their shift. 52% of staff feel their families are well taken care of and have peace of mind. 36% of staff are tired, and 52% of staff feel they had too much to do during the day. 43% of staff are tired because they found it difficult to sleep

during the day and 38% of staff wish they could go back to sleep. 55% of staff are not stressed at the thought of going back onto their shift.

4.3.5 During my shift...

During my shift.....	Agree	Neutral	Disagree
1) I am alert to help my patients	52	17	31
2) I take pride and am happy to do my job	62	24	14
3) I think of my family often	57	12	31
4) I am concerned that my family are okay	74	12	14
5) My patients are my biggest concern	62	19	19
6) I feel tired	43	29	29
7) I wish I could have a rest	69	14	17
8) I wish I could sleep for atleast an hour	67	14	19

Table 4.6: Respondents percentage results from questions in section “During my Shift” (n: 42)

From the table above, only 52% of staff feel they are alert to help their patients. 62% of staff are happy to do their work and take pride in what they do, and 62% consider their patients their biggest concern. 57% of staff are thinking about their family, while 74% are concerned if their families are okay. 43% of staff are tired, 69% would like rest, and 67% would like to sleep.

4.3.6 Taking a break during my shift...

Taking a break during my shift.....	Agree	Neutral	Disagree
1) I still try to find time to rest	7	5	88
2) I have a rest and feel much better to help patients afterwards	100	0	0
3) I find having break reduces mistake	100	0	0
4) I find having a rest makes me more alert	100	0	0

Table 4.7: Respondents percentage results from questions in section “Taking a break during my shift” (n: 42)

It is important to note if the staff is taking a break during working hours for two reasons; firstly, they are not getting enough rest during the day and maybe too tired to perform their duties and secondly, if the staff is resting and not alert, patient care will be affected. According to Table 4.7, only 7% find time to rest, but 100% of staff are confident that taking a break helps them efficiently perform.

According to Figure 4.9, 88% of staff state an hour's rest is adequate to perform efficiently.

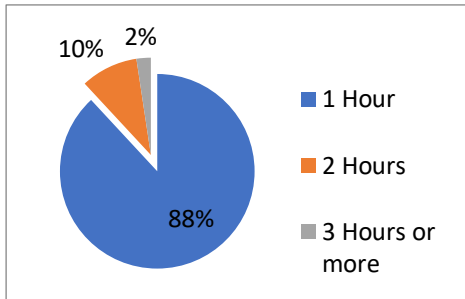


Figure 4.9: Hours of rest staff would need to be productive (n: 42)

4.4. Section 3: Their family

The study aims to find the effects of family life on work performance; it is, therefore, essential to understanding the employee's family situation. The biographic information in Section 4.2 gives the researcher insight into the employee's marital status, number of children and their youngest child's age. This section will concentrate on the family dynamics and support offered to employees by their family.

4.4.1 My Family...

<u>My Family.....</u>	Agree	Neutral	Disagree	N/A
1) Love and support me	71	17	12	0
2) Support my job choices	31	17	52	0
3) Are understanding of my working hours	24	14	62	0
4) Give me time to rest	60	24	17	0
5) Takes care of my home while I sleep and go to work	57	17	26	0
6) My Spouse is very helpful	24	14	14	48
7) My Children can look after themselves	33	12	38	17
8) My children need me to look after them	31	19	33	17
9) My children go to school and day care	52	10	21	17
10) My family look after my children and my home	45	38	7	10
11) My home life is stress free	33	45	21	0
12) My Relationship with my spouse is supportive	21	2	29	48

Table 4.8: Respondents percentage results from questions in section "My Family" (n: 42)

Table 4.8, gives us insight into the employee’s home environment. 71% of employees agree that their families love and support them, but only 31% are supportive of the employee’s job choice, and 24% agree that their family is supportive of their job hours.

4.4.2 My family can help me by...

Table 4.9 indicates ways in which the family can support or help the night duty employee. From the table below, more than 50% of all respondent state they would like help in the following ways. Support structures at home are vital to maintaining Family-work balance. 88% of respondents agree that their family gives them time to rest and sleep. 88% of the respondents agree that their family makes them happy and are understanding of their jobs. 93% of respondent’s state that their family does not upset them and are loving towards them. While support of their job and the respondents themselves rank high, support of household duties is low ranking. 55% of respondents agree that their families help with looking after children and 62% agree that their families help with cooking.

My Family help me by.....	Agree	Neutral	Disagree	N/A
1) Looking after the kids	55	7	5	33
2) Cooking	62	7	24	7
3) Giving me time to sleep and rest	88	7	5	0
4) They make me happy	88	10	2	0
5) Take away some financial burdens	67	26	7	0
6) Being understanding of my job	88	5	7	0
7) Not fighting with me or making me upset	93	5	2	0
8) Loving me	93	2	5	0

Table 4.9: Respondents percentage results from questions in section “My Family help me by” (n: 42)

Figure 4.10 represents a ranking of what the respondents would like to be helped the most. Help with the financial burdens of living ranks the highest at 43%. Respondents would like their family to give them more time to rest at 24%. Helping to look after children ranks at 17%. Being understanding of their job has 9%.

Helping with the cook is 5% and not upsetting me is 2%. Making me happy and loving me was not selected by any of the respondents.

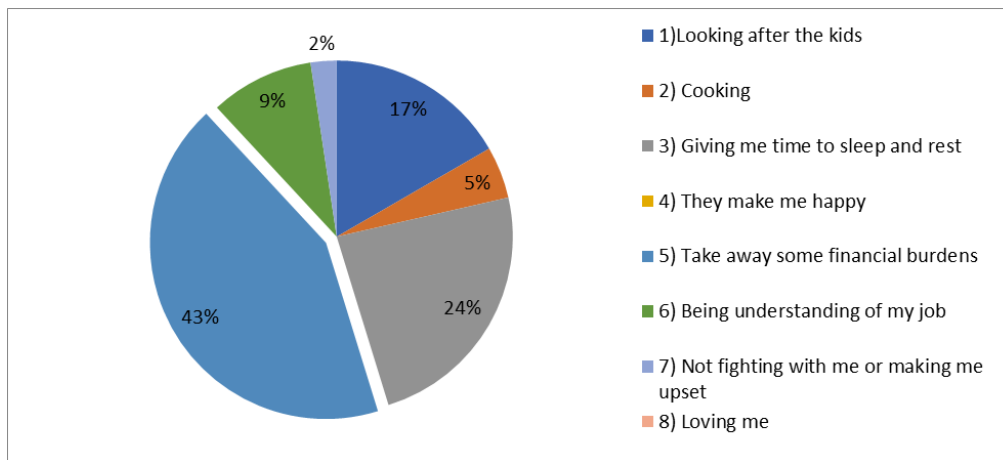


Figure 4.10 My family can help me most by.... (n: 42)

4.5 Section 4: Their job

Section four details the respondent's jobs. Information gathered in this section helps identify how employees feel about their job, what they like most about the job, what they like least about their job and how the company can support them.

4.5.1 My Job....

My Job.....	Agree	Neutral	Disagree
1) I know exactly what is expected off me	62	17	21
2) I have enough resources to perform my job effectively	36	10	55
3) If I do not know something I have people I can ask	38	24	38
4) My Peers are very supportive	31	14	55
5) My Manager is very supportive	29	17	55
6) My Job does not affect my family	36	10	55
7) My Family does not affect my job	29	12	60
8) I am always able to perform my job	67	24	10
9) My job does not affect my sleep	17	14	69
10) I am still able to rest while at work	40	31	29
11) I am always able to attend to my patients	67	29	5
12) There is enough staff on my shift	7	10	83

Table 4.10: Respondents percentage results from questions in section “My Job” (n: 42)

The top three statements employees agree with is “I am always able to perform my job) at 67%, “I am always able to attend to my patients.” 67% and “I know exactly what is expected of me 62%. Respondents disagreed with the statements, “there is enough staff on my shift” by 83%, My job does not affect my sleep” at 69%, and 60% of respondents disagree that their families do not affect their job.

4.5.2 I love night-shift because.....

When respondents were asked about what they love about night shift, 100% of them agreed that the pay was better for the night shift, 88% agree they have more time off to spend with their family, and 79% agree that they have a better work-life balance.

I love night shift because.....	Agree	Neutral	Disagree
1) I have time off to spend with my family	81	17	2
2) I am able to spend the day looking after my family	71	21	7
3) I have enough time to rest	36	24	40
4) The pay is better for night shift	100	0	0
5) I do not like night duty	14	14	71
6) I am forced to do night duty	19	10	71
7) I prefer working during the day	26	5	69
8) I get to rest during the day and am more productive at night	48	24	29
9) There is not much supervision and I can rest	29	36	36
10) Work is not so stressful at night	50	26	24
11) I can rest while my patients are asleep	69	12	19
12) I have a better work-life balance	79	10	12

Table 4.11: Respondents percentage results from questions in section “I love night-shift because” (n: 42)

Respondents were asked what did they love most about night shift; the responses are represented in figure 4.11. 38% of respondent stated they love night shift because the pay is higher than the day shift. 33% stated they loved night shift because they had time to look after their family during the day. While 7% of the respondents agreed that work is not as stressful at night and 7% state that they have a better work-life balance. None of the respondents felt they are forced to do night duty or prefer to work during the day or felt they could rest because there wasn't enough supervision.

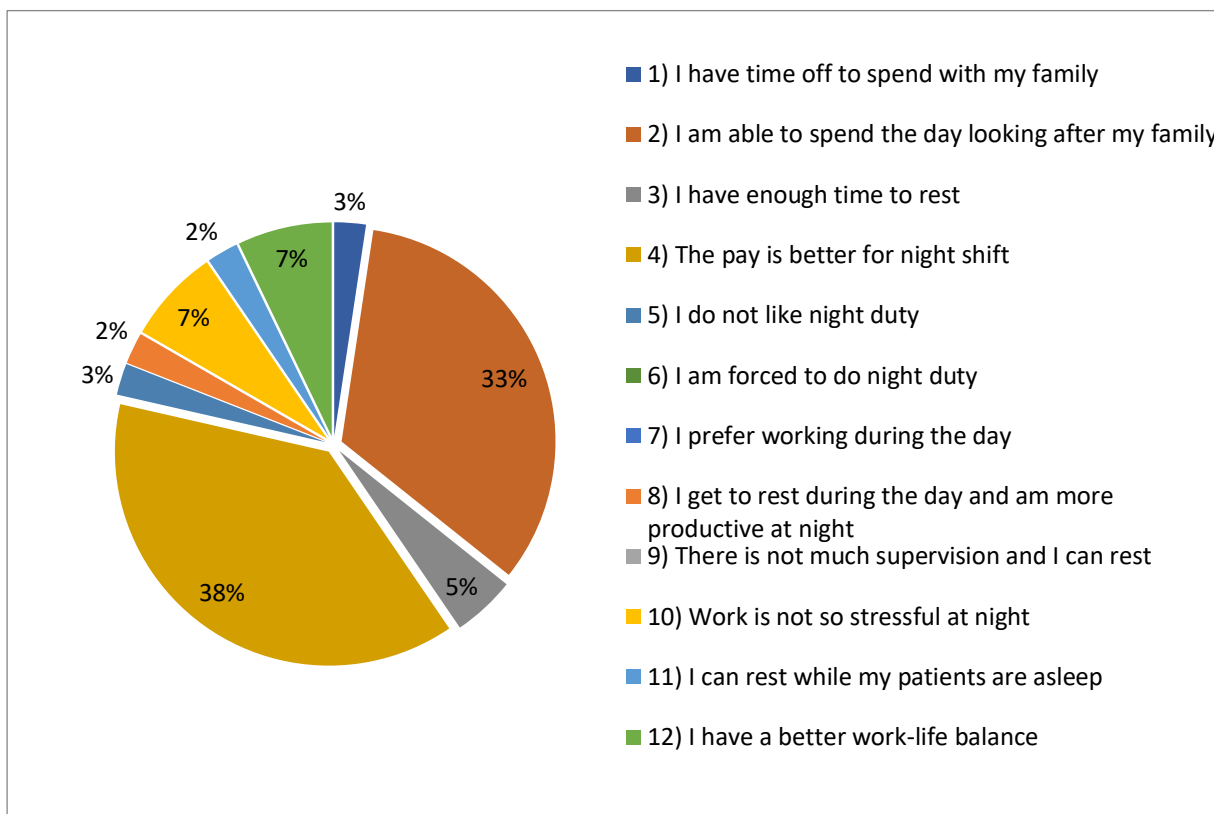


Figure 4.11 I love night shift most because.... (n: 42)

4.5.3 What I like least about night shift....

What do I like least about night shift.....	Agree	Neutral	Disagree
1) I do not get enough sleep	60	14	26
2) It is difficult because there is little supervision	50	19	31
3) Patients are more demanding at night	26	38	36
4) I wish I was home with my family	64	17	19
5) I do not get enough time to spend with my family	38	10	52
6) I find it difficult to sleep during the day	57	21	21
7) Family responsibilities stop me from resting during the day	62	17	21
8) Night shift is hard because I work at night and during the day	33	5	62
9) It changes my sleep patterns	76	12	12
10) Night shift affects my family life	52	10	38
11) Lack of rest affects my work	88	5	7
12) It affects my sleep patterns	76	12	12

Table 4.12: Respondents percentage results from questions in section “What do I like least about night shift” (n: 42)

Respondents disliked night shift because it affected their sleep, the top three reasons employees did not like night duty is because of the lack of rest affecting their work at 88%, 76% agrees that night duty affects their sleeping patterns, and 76% agrees that night duty changes their sleep patterns. When asked to select which of the above reasons respondents disliked the most about the night shift, respondent responses were as follows (Figure 4.12). 36% of respondents wished they be home with their family. 17% agreed that night shift was hard because they worked during the day. 9% disliked night duty because there was little supervision.

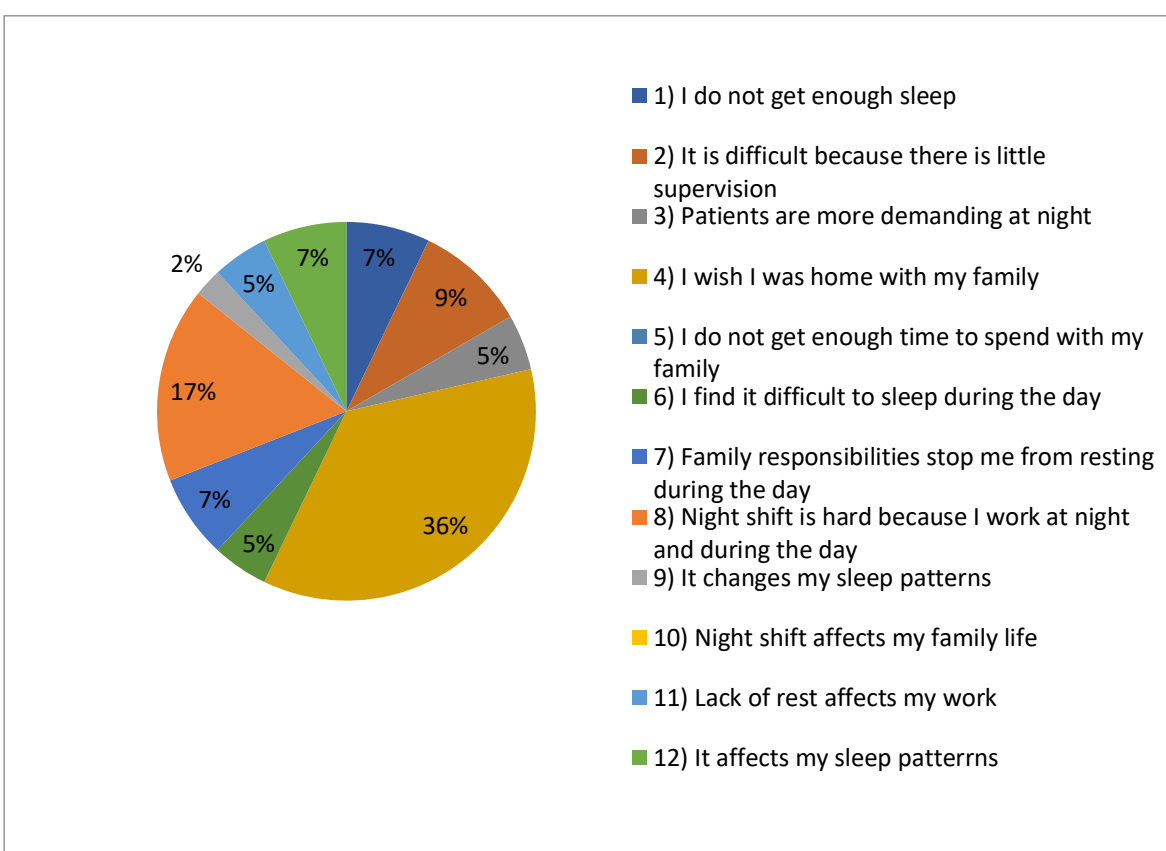


Figure 4.12 What do I like least about night shift.... (n: 42)

4.5.4 My company can help me by....

According to table 4.13, 88% of staff agree they need better supervision and support, 86% would like more staff to be employees to help on the shift, and 81% would like their times to be adjusted to suit the company and themselves. When respondents were asked to state which is the best way for the company to help,

the top three choices were to have time to rest on duty-36%, Providing daycare for their children-21% and 17% needed more staff on duty.

<u>My Company can help me by.....</u>	Agree	Neutral	Disagree	N/A
1) Providing better training for me	55	29	17	0
2) Employing more staff to help my shift	86	7	7	0
3) Providing a day care for my kids	50	7	10	33
4) Giving me an hour to sleep during my shift	74	14	12	0
5) Giving me an hour unpaid to sleep during my shift	17	5	79	0
6) Providing assistance to help with my family problems	33	24	43	0
7) Providing better supervision and support	88	5	7	0
8) Adjusting my times to suit me and the company	81	10	10	0

Table 4.13: Respondents percentage results from questions in section “My Company can help me by” (n: 42)

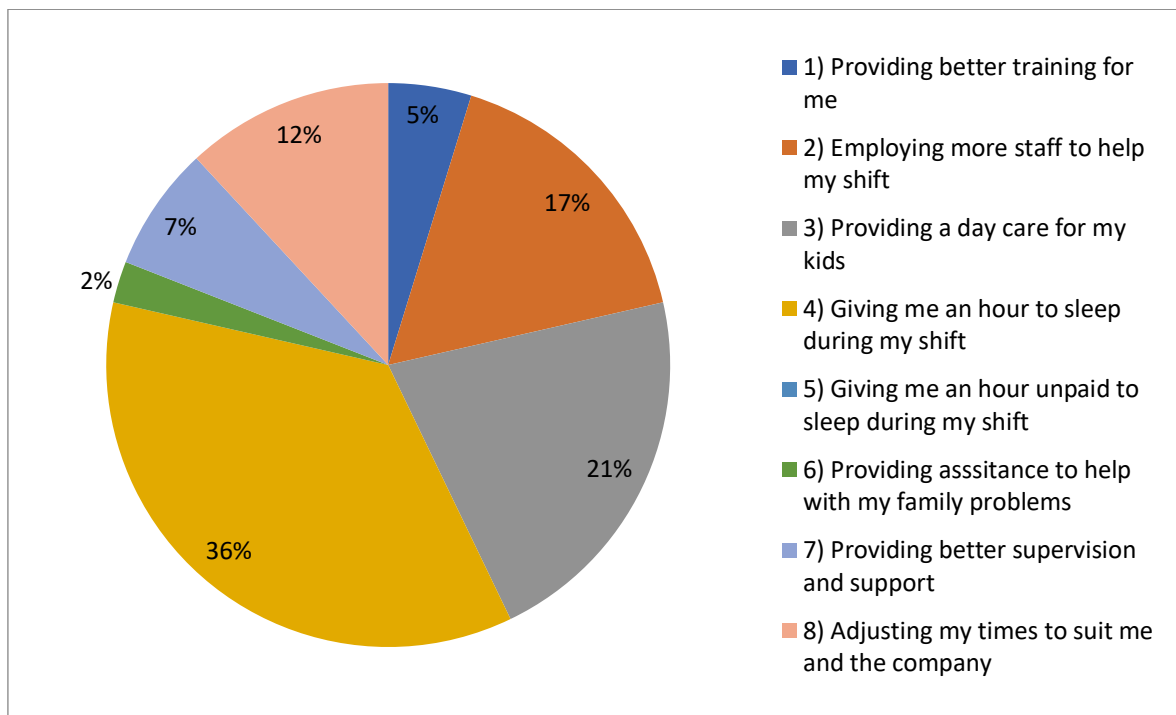


Figure 4.13 My company can help me most by.... (n: 42)

4.5.6 Company Support....

Results from the company support structures are disappointing. From table 4.14, employees are aware of the wellness programs but do not have faith in this system. 79% disagree that they use this company program, while 86% disagree that they feel comfortable talking to the wellness center operator. 46% disagree

that their manager is a good support system and 69% do not have faith that the Human Resources department can help them with their problems. All respondents are aware that the company has a sleeping on duty policy and that if found sleeping on duty they can be dismissed.

Company Support	Agree	Neutral	Disagree
1) I am aware of the company wellness program	69	10	21
2) I use the company wellness program	14	7	79
3) I find the company wellness program effective	19	12	69
4) I am comfortable to speak to the operator of the wellness program	7	7	86
5) My Manager is a very good support system	29	24	48
6) My HR department is effective in dealing with any issue I bring to them	19	12	69
Does your company have a sleeping on duty policy	Yes <input type="text" value="100"/>	No <input type="text" value="0"/>	
Is Sleeping on duty dismissable in your company	Yes <input type="text" value="100"/>	No <input type="text" value="0"/>	

Table 4.14: Respondents percentage results from questions in section “Company Support” (n: 42)

4.6 Inferential statistics

Inferential statistics allow the researcher to utilize the data collected to make interpretations about the study (Quinlan, Kane & Trochim, 2008). This study used Cross tabulation and Chi-square tests that were analysed by SPSS to look for generalizations and patterns that may exist. The Chi-Square tests and cross tabulation (Appendix 3) was done between demographic factors and the 24-hours of the night shift employee. When working with the chi-square test, ‘the primary value that you are interested in from the output is the Pearson Chi-square value, a p-value is generated and if $p < 0.05$ this indicates significant results in the test (Quinlan et al., 2008). Cross-tabulation results have been divided into factors that contribute to Family-work conflict by reducing rest time and interfering with work during the shift and by factors promoting productivity in the workplace.

4.6.1 Gender versus 24-hours of a night shift employee

Gender showed a significant relationship in the 24-hour cycle. Of the 31 questions posed, 11 of the questions had a p-value < 0.05 , showing a significant relationship

between Gender and the cycle (Table 4.15). Most of the relationship was found in the timeline after the employee went home from their shift.

	Gender %						Chi-Square	P-Value
	Male			Female				
	A	N	D	A	N	D		
When I go home from night shift.....								
1) I am extremely tired	44.4	11.1	44.4	69.7	21.2	9.1	6.3833	.046829
2) I go straight to sleep	66.7	22.2	11.1	30.3	12.1	57.6	6.1657	.046829
3) I get my family ready for their day	11.1	33.3	55.6	69.7	9.1	21.2	10.0758	.006487
4) I do all the household chores	11.1	11.1	77.8	75.8	27.3	3.0	11.0657	.003955
5) I look after my children	11.1	22.2	66.7	51.8	3.0	30.3	5.2088	.073949
6) My spouse/ family take care of the home so I can rest	77.8	11.1	11.1	27.3	27.3	45.5	7.7	.02128
During the day.....								
1) I prepare for when my family comes home	11.1	11.1	77.8	69.7	21.2	9.1	0.4737	.789095
2) I rest	77.8	11.1	11.1	36.4	18.2	45.5	5.0825	.078766
3) I look after my children	11.1	11.1	66.7	57.6	15.2	18.2	8.6734	.01308
4) I look after my extended family	11.1	44.4	44.4	57.6	6.1	36.4	10.6202	.004941
5) I have another job	22.2	44.4	33.3	24.2	6.1	69.7	8.8155	.012182
6) I watch TV	55.6	11.1	33.3	42.4	24.2	33.3	0.8386	.65752
7) I spend time with family and friends	77.8	11.1	11.1	63.6	15.2	21.2	0.6717	.714724
8) I take time to enjoy my hobbies	44.4	22.2	33.3	36.4	9.1	54.5	1.7818	.410283
Before I start my night shift.....								
1) I am fully rested	44.4	11.1	44.4	39.4	39.4	21.2	3.1988	.202014
2) I have peace of mind	55.6	11.1	33.3	51.5	24.2	24.2	0.8142	.665577
3) My family is well taken care off	77.8	11.1	11.1	45.5	30.3	24.2	2.974	.226052
4) I am ready for the night ahead	33.3	22.2	44.4	48.5	21.2	30.3	0.7865	.674873
5) I am tired from the day	44.4	11.1	44.4	33.3	24.2	42.4	0.8202	.663583
6) I am tired because I had to much to do during the day	22.2	11.1	66.7	60.6	18.2	21.2	6.9214	.031408
7) I am tired because I find it difficult to sleep	55.6	22.2	22.2	36.4	18.2	42.4	1.2492	.535487
8) I am stressed at the thought off going to work	33.3	22.2	44.4	27.3	15.2	57.6	0.5257	.76886
9) I wish I could go to bed	55.6	11.1	33.3	33.3	24.2	42.4	1.6301	.442623
During my shift.....								
1) I am alert to help my patients	44.4	11.1	44.4	54.5	36.4	9.1	6.8976	.031782
2) I take pride and am happy to do my job	55.6	11.1	33.3	63.6	27.3	9.1	3.7594	.152633
3) I think of my family often	11.1	22.2	66.7	69.7	9.1	21.2	9.992	.006765
4) I am concerned that my family are okay	55.6	22.2	22.2	78.8	9.1	12.1	2.0464	.359443
5) My patients are my biggest concern	44.4	11.1	44.4	66.7	21.2	12.1	4.8217	.08974
6) I feel tired	55.6	11.1	33.3	39.4	27.3	33.3	1.7441	.418092
7) I wish I could have a rest	55.6	33.3	11.1	72.7	9.1	18.2	3.4232	.180577
8) I wish I could sleep for atleast an hour	55.6	22.2	22.2	69.7	12.1	18.2	0.778	.67781

Table 4.15: Significant Chi-Square test and cross tabulation results from Gender versus 24-hour hours of a night shift employee (n: 42)

4.6.2 Age versus 24-hours of a night shift employee

The Age demographic showed significant levels in only one question. Respondents showed a p-value of 0.038 responding to the statement” I look after my children” when I get home from my shift.

4.6.3 Marital Status versus 24-hours of a night shift employee

Marital status of the employee showed a significant relationship in questions regarding looking after the home and family. “My family takes care of my home, so I can rest” showed a p-value of 0.049. However, a significant relationship has also been found when asked “Do I think of my family often” at work, with a p-value of 0.004.

	Age %												Chi-Square	P-Value	
	20 to 30			31 to 40			41 to 50			50+					
	A	N	D	A	N	D	A	N	D	A	N	D			
When I go home from night shift.....															
1) I am extremely tired	50.0	21.4	28.6	70.0	20.0	10.0	80.0	0.0	20.0	66.7	33.3	0.0	3.0002	.809819	
2) I go straight to sleep	42.9	21.4	35.7	30.0	65.0	5.0	0.0	40.0	80.0	0.0	33.3	66.7	6.4095	.378911	
3) I get my family ready for their day	50.0	14.3	35.7	75.0	15.0	10.0	20.0	0.0	80.0	33.3	33.3	33.3	8.0874	.23177	
4) I do all the household chores	50.0	21.4	28.6	80.0	30.0	10.0	80.0	0.0	20.0	33.3	33.3	33.3	2.6484	.851501	
5) I look after my children	28.6	28.6	14.3	65.0	5.0	25.0	20.0	0.0	80.0	0.0	0.0	100.0	13.3235	.038177	
6) My spouse/ family take care of the home so I can rest	57.1	35.7	7.1	25.0	35.0	40.0	40.0	20.0	40.0	33.3	33.3	33.3	5.1488	.524887	
During the day.....															
1) I prepare for when my family comes home	57.1	14.3	28.6	55.0	25.0	20.0	80.0	0.0	20.0	33.3	33.3	33.3	1.3469	.969011	
2) I rest	64.3	0.0	35.7	25.0	35.0	40.0	60.0	0.0	40.0	66.7	0.0	33.3	4.4265	.619165	
3) I look after my children	42.9	7.1	14.3	55.0	25.0	15.0	20.0	0.0	80.0	0.0	0.0	100.0	5.9877	.424572	
4) I look after my extended family	21.4	14.3	64.3	80.0	5.0	35.0	80.0	20.0	20.0	33.3	66.7	0.0	7.8137	.252069	
5) I have another job	21.4	21.4	57.1	25.0	15.0	60.0	20.0	0.0	80.0	33.3	0.0	66.7	1.0608	.983201	
6) I watch TV	64.3	7.1	28.6	30.0	30.0	40.0	80.0	0.0	20.0	0.0	66.7	33.3	5.335	.501619	
7) I spend time with family and friends	50.0	21.4	28.6	70.0	15.0	15.0	80.0	0.0	20.0	100.0	0.0	0.0	2.3977	.880816	
8) I take time to enjoy my hobbies	35.7	7.1	57.1	30.0	20.0	50.0	80.0	0.0	20.0	33.3	0.0	66.7	3.6619	.722319	
Before I start my night shift.....															
1) I am fully rested	42.9	35.7	35.7	25.0	30.0	30.0	60.0	20.0	20.0	0.0	66.7	33.3	1.1158	.98084	
2) I have peace of mind	35.7	7.1	57.1	50.0	35.0	15.0	80.0	0.0	0.0	100.0	0.0	0.0	8.4919	.2044231	
3) My family is well taken care off	35.7	28.6	35.7	60.0	25.0	15.0	80.0	20.0	0.0	33.3	33.3	33.3	3.0408	.803706	
4) I am ready for the night ahead	42.9	21.4	35.7	40.0	25.0	35.0	80.0	20.0	0.0	33.3	0.0	66.7	0.9416	.98773	
5) I am tired from the day	21.4	28.6	50.0	45.0	15.0	40.0	40.0	20.0	40.0	33.3	33.3	33.3	2.5133	.666972	
6) I am tired because I had to much to do during the day	50.0	14.3	35.7	80.0	20.0	25.0	40.0	20.0	40.0	33.3	33.3	33.3	1.6744	.947079	
7) I am tired because I find it difficult to sleep	35.7	28.6	35.7	45.0	15.0	40.0	40.0	0.0	80.0	66.7	33.3	0.0	4.3994	.6228	
8) I am stressed at the thought off going to work	21.4	21.4	57.1	35.0	20.0	45.0	20.0	0.0	80.0	33.3	0.0	66.7	1.4234	.964419	
9) I wish I could go to bed	28.6	21.4	50.0	40.0	25.0	35.0	80.0	0.0	40.0	33.3	33.3	33.3	2.2087	.899534	
During my shift.....															
1) I am alert to help my patients	50.0	7.1	42.9	55.0	25.0	20.0	60.0	20.0	20.0	33.3	33.3	33.3	2.8023	.833214	
2) I take pride and am happy to do my job	50.0	21.4	28.6	70.0	25.0	5.0	60.0	40.0	0.0	66.7	0.0	33.3	4.4751	.612657	
3) I think of my family often	42.9	7.1	50.0	70.0	5.0	25.0	80.0	40.0	0.0	33.3	33.3	33.3	6.1083	.411165	
4) I am concerned that my family are okay	71.4	21.4	7.1	85.0	5.0	10.0	40.0	20.0	40.0	66.7	0.0	33.3	8.2333	.221502	
5) My patients are my biggest concern	71.4	21.4	7.1	60.0	20.0	20.0	40.0	20.0	40.0	66.7	0.0	33.3	3.7472	.710839	
6) I feel tired	21.4	28.6	50.0	50.0	30.0	20.0	40.0	40.0	20.0	100.0	0.0	0.0	4.6721	.599739	
7) I wish I could have a rest	64.3	14.3	21.4	80.0	10.0	10.0	40.0	40.0	20.0	66.7	0.0	33.3	5.55	.475434	
8) I wish I could sleep for atleast an hour	64.3	7.1	28.6	75.0	15.0	10.0	40.0	40.0	20.0	66.7	0.0	33.3	6.0416	.418554	

Table 4.16: Significant Chi-Square test and cross tabulation results from Age versus 24-hour hours of a night shift employee (n: 42)

	Marital Status %								Chi-Square	P-Value
	Married			Not Married						
	A	N	D	A	N	D				
When I go home from night shift.....										
1) I am extremely tired	59.1	22.7	18.2	70.0	15.0	15.0	0.586		7.46028	
2) I go straight to sleep	22.7	13.6	63.6	55.0	15.0	30.0	5.3669		0.68326	
3) I get my family ready for their day	72.7	13.6	13.6	40.0	15.0	45.0	5.5841		0.61296	
4) I do all the household chores	50.0	36.4	13.6	55.0	10.0	25.0	4.1809		1.23631	
5) I look after my children	50.0	4.5	45.5	35.0	15.0	50.0	1.7977		4.07032	
6) My spouse/ family take care of the home so I can rest	22.7	36.4	40.9	55.0	10.0	35.0	6.0184		0.49331	
During the day.....										
1) I prepare for when my family comes home	63.6	22.7	13.6	50.0	15.0	35.0	2.6775		2.62173	
2) I rest	40.9	22.7	36.4	50.0	10.0	40.0	1.2459		5.36351	
3) I look after my children	45.5	18.2	36.4	40.0	10.0	1.0182			6.01042	
4) I look after my extended family	68.2	13.6	18.2	25.0	15.0	60.0	8.925		0.11533	
5) I have another job	22.7	9.1	68.2	25.0	20.0	55.0	1.1895		5.51698	
6) I watch TV	45.5	31.8	22.7	45.0	10.0	45.0	3.8868		1.43213	
7) I spend time with family and friends	77.3	13.6	9.1	55.0	15.0	30.0	3.1977		2.02126	
8) I take time to enjoy my hobbies	40.9	13.6	45.5	35.0	10.0	55.0	0.4033		8.17383	
Before I start my night shift.....										
1) I am fully rested	45.5	31.8	22.7	35.0	35.0	30.0	0.5263		7.68636	
2) I have peace of mind	68.2	18.2	13.6	35.0	25.0	40.0	5.2095		0.73921	
3) My family is well taken care off	54.5	27.3	18.2	50.0	25.0	25.0	0.2893		8.65344	
4) I am ready for the night ahead	63.6	13.6	22.7	25.0	30.0	45.0	6.3251		0.42317	
5) I am tired from the day	31.8	27.3	40.9	40.0	15.0	45.0	0.9736		6.14579	
6) I am tired because I had to much to do during the day	45.5	22.7	31.8	80.0	10.0	30.0	1.4525		4.83717	
7) I am tired because I find it difficult to sleep	45.5	45.5	9.1	40.0	30.0	30.0	3.1341		2.08661	
8) I am stressed at the thought off going to work	27.3	18.2	54.5	30.0	15.0	55.0	0.0913		9.55374	
9) I wish I could go to bed	36.4	22.7	40.9	40.0	20.0	40.0	0.0749		9.63259	
During my shift.....										
1) I am alert to help my patients	59.1	27.3	13.6	45.0	35.0	20.0	0.8538		6.52545	
2) I take pride and am happy to do my job	72.7	22.7	4.5	50.0	25.0	25.0	3.965		1.37722	
3) I think of my family often	72.7	18.2	9.1	40.0	5.0	55.0	10.6263		0.04926	
4) I am concerned that my family are okay	61.8	4.5	13.6	55.0	20.0	15.0	2.5169		2.84091	
5) My patients are my biggest concern	63.6	22.7	13.6	60.0	15.0	25.0	1.061		5.88307	
6) I feel tired	45.5	36.4	18.2	40.0	20.0	40.0	2.8		2.46597	
7) I wish I could have a rest	68.2	13.6	18.2	70.0	15.0	15.0	0.0823		9.59691	
8) I wish I could sleep for atleast an hour	63.6	18.2	18.2	70.0	10.0	20.0	0.5727		7.50989	

Table 4.17: Significant Chi-Square test and cross tabulation results from Marital Status versus 24-hour hours of a night shift employee (n: 42)

4.6.4 Age of youngest child and Number of children versus family work conflict versus 24-hours of a night shift employee

	Number of Children %													Chi-Square	P-Value
	No Children			1 Child			2 Children			3 + Children					
	A	N	D	A	N	D	A	N	D	A	N	D			
When I go home from night shift.....															
1) I am extremely tired	66.7	22.2	11.1	66.7	11.1	22.2	52.9	11.8	35.3	85.7	0.0	14.3	3.5774	.73364	
2) I go straight to sleep	11.1	22.2	66.7	77.8	0.0	22.2	29.4	11.8	58.8	42.9	28.8	28.8	11.3463	.078246	
3) I get my family ready for their day	11.1	22.2	66.7	77.8	11.1	11.1	82.4	17.6	0.0	28.8	0.0	71.4	17.3036	.00823	
4) I do all the household chores	44.4	11.1	44.4	77.8	11.1	11.1	47.1	47.1	5.9	71.4	0.0	28.8	11.7888	.066849	
5) I look after my children	0.0	0.0	0.0	55.6	0.0	44.4	64.7	5.9	29.4	14.3	0.0	85.7	10.2408	.114869	
6) My spouse/ family take care of the home so I can rest	66.6	22.2	11.1	44.4	11.1	55.6	17.6	35.3	47.1	42.9	14.3	42.9	7.9745	.239977	
During the day.....															
1) I prepare for when my family comes home	11.1	33.3	55.6	77.8	0.0	22.2	64.7	29.4	5.9	71.4	0.0	28.8	11.4239	.076127	
2) I rest	77.8	11.1	11.1	33.3	11.1	55.6	23.5	29.4	47.1	71.4	0.0	28.8	9.1694	.164273	
3) I look after my children	0.0	0.0	0.0	77.8	0.0	22.2	58.8	23.5	17.6	14.3	0.0	85.7	19.5616	.003313	
4) I look after my extended family	22.2	33.3	44.4	22.2	0.0	77.8	64.7	5.9	29.4	71.4	28.8	0.0	10.6014	.101504	
5) I have another job	22.2	33.3	44.4	0.0	11.1	88.9	35.3	11.8	52.9	28.8	0.0	71.4	4.3013	.839975	
6) I watch TV	55.6	11.1	33.3	44.4	0.0	55.6	35.3	41.2	23.5	57.1	14.3	28.8	6.5997	.359458	
7) I spend time with family and friends	44.4	22.2	33.3	88.9	11.1	0.0	58.8	17.6	23.5	85.7	0.0	14.3	2.54931	.862931	
8) I take time to enjoy my hobbies	22.2	22.2	55.6	44.4	0.0	55.6	29.4	17.6	52.9	71.4	0.0	28.8	3.8081	.702895	
Before I start my night shift.....															
1) I am fully rested	66.7	22.2	11.1	11.1	33.3	55.6	41.2	41.2	17.6	42.9	28.8	28.8	8.3826	.211389	
2) I have peace of mind	66.7	11.1	22.2	11.1	22.2	66.7	52.9	29.4	17.6	85.7	14.3	0.0	10.925	.090722	
3) My family is well taken care off	44.4	11.1	44.4	44.4	44.4	11.1	52.9	23.5	23.5	71.4	28.8	0.0	4.6857	.684707	
4) I am ready for the night ahead	44.4	11.1	44.4	33.3	44.4	22.2	47.1	17.6	35.3	57.1	14.3	28.8	4.2009	.649506	
5) I am tired from the day	44.4	0.0	55.6	33.3	22.2	44.4	29.4	35.3	35.3	42.9	14.3	42.9	1.4865	.960388	
6) I am tired because I had to much to do during the day	55.6	0.0	44.4	66.7	11.1	22.2	47.1	29.4	23.5	42.9	14.3	42.9	3.068	.900261	
7) I am tired because I find it difficult to sleep	33.3	33.3	33.3	55.6	33.3	11.1	35.3	11.8	52.9	57.1	0.0	42.9	5.5822	.471583	
8) I am stressed at the thought off going to work	33.3	0.0	66.7	33.3	22.2	44.4	23.5	29.4	47.1	28.8	0.0	71.4	2.5997	.857144	
9) I wish I could go to bed	44.4	22.2	33.3	33.3	22.2	44.4	29.4	23.5	47.1	57.1	14.3	28.8	5.9388	.430106	
During my shift.....															
1) I am alert to help my patients	66.7	11.1	22.2	33.3	44.4	22.2	52.9	5.9	41.2	57.1	14.3	28.8	5.9965	.423581	
2) I take pride and am happy to do my job	33.3	33.3	33.3	77.8	11.1	11.1	70.6	23.5	5.9	57.1	28.8	14.3	5.995	.423754	
3) I think of my family often	11.1	77.8	11.1	77.8	0.0	22.2	70.6	11.8	17.6	57.1	28.8	14.3	13.5494	.035095	
4) I am concerned that my family are okay	55.6	33.3	11.1	88.9	0.0	11.1	82.4	5.9	11.8	57.1	14.3	28.8	5.2444	.512865	
5) My patients are my biggest concern	66.7	11.1	22.2	66.7	22.2	11.1	64.7	23.5	11.8	42.9	14.3	42.9	4.0075	.875656	
6) I feel tired	44.4	0.0	55.6	33.3	33.3	33.3	41.2	41.2	17.6	57.1	28.8	14.3	3.5769	.733708	
7) I wish I could have a rest	44.4	33.3	22.2	88.9	0.0	11.1	76.9	5.9	17.6	57.1	28.8	14.3	4.9888	.545251	
8) I wish I could sleep for atleast an hour	44.4	22.2	33.3	88.9	0.0	11.1	70.6	11.8	17.6	57.1	28.8	14.3	3.503	.7435667	

Table 4.18: Significant Chi-Square test and cross tabulation results from number of children versus 24-hour hours of a night shift employee (n: 42)

Statistics revealed that the youngest child's age and the number of children had a significant result when the respondents were asked questions about their family.

Both statistics show a significant relationship in the following questions:

“I get my family ready for their day” when I get home from my shift, “I look after my children” during the day and, “I think of my family often” while on shift.

	Youngest child's age %																		Chi-Square	P-Value
	No Children			1 to 10			11 to 17			18 to 24			25+							
	A	N	D	A	N	D	A	N	D	A	N	D	A	N	D					
When I go home from night shift.....																				
1) I am extremely tired	75.0	12.5	25.0	57.9	21.1	21.1	50.0	33.3	16.7	33.3	33.3	33.3	60.0	20.0	20.0	1.822	.985991			
2) I go straight to sleep	12.5	25.0	75.0	47.4	10.5	42.1	33.3	16.7	50.0	33.3	33.3	33.3	60.0	20.0	20.0	5.7451	.675759			
3) I get my family ready for their day	12.5	25.0	75.0	84.2	10.5	5.3	66.7	16.7	16.7	33.3	33.3	33.3	20.0	60.0	20.0	19.0145	.014782			
4) I do all the household chores	60.0	12.5	50.0	57.9	10.5	31.6	66.7	16.7	16.7	33.3	33.3	33.3	40.0	20.0	40.0	5.9818	.649269			
5) I look after my children	0.0	0.0	0.0	57.9	5.3	36.8	66.7	16.7	16.7	33.3	33.3	33.3	20.0	20.0	60.0	9.6827	.28801			
6) My spouse/ family take care of the home so I can rest	75.0	25.0	12.5	31.6	21.1	47.4	16.7	33.3	50.0	33.3	33.3	33.3	60.0	20.0	20.0	6.6306	.576959			
During the day.....																				
1) I prepare for when my family comes home	12.5	37.5	62.5	78.9	10.5	10.5	60.0	33.3	16.7	33.3	33.3	33.3	40.0	20.0	40.0	13.4697	.096678			
2) I rest	87.5	12.5	12.5	26.3	21.1	52.6	33.3	33.3	33.3	33.3	33.3	33.3	60.0	20.0	20.0	8.7635	.362637			
3) I look after my children	0.0	0.0	0.0	73.7	10.5	15.8	50.0	33.3	16.7	33.3	33.3	33.3	20.0	20.0	60.0	14.2261	.076058			
4) I look after my extended family	25.0	37.5	50.0	36.8	5.3	5.3	66.7	16.7	16.7	33.3	33.3	33.3	20.0	40.0	40.0	8.6579	.371973			
5) I have another job	25.0	37.5	50.0	15.8	10.5	73.7	33.3	16.7	50.0	33.3	33.3	33.3	20.0	20.0	60.0	4.3361	.825602			
6) I watch TV	37.5	12.5	37.5	42.1	26.3	31.6	60.0	16.7	33.3	33.3	33.3	33.3	40.0	40.0	20.0	2.0895	.978144			
7) I spend time with family and friends	50.0	25.0	37.5	68.4	21.1	10.5	66.7	16.7	16.7	33.3	33.3	33.3	60.0	20.0	20.0	3.2947	.91453			
8) I take time to enjoy my hobbies	25.0	25.0	62.5	31.6	10.5	57.9	66.7	16.7	16.7	33.3	33.3	33.3	60.0	20.0	20.0	6.6355	.576425			
Before I start my night shift.....																				
1) I am fully rested	75.0	25.0	12.5	31.6	42.1	26.3	50.0	16.7	33.3	33.3	33.3	33.3	40.0	40.0	20.0	4.2704	.831939			
2) I have peace of mind	75.0	12.5	25.0	31.6	26.3	42.1	66.7	16.7	16.7	33.3	33.3	33.3	60.0	20.0	20.0	4.9645	.781362			
3) My family is well taken care off	50.0	12.5	50.0	47.4	31.6	21.1	66.7	16.7	16.7	33.3	33.3	33.3	60.0	20.0	20.0	3.7223	.881265			
4) I am ready for the night ahead	50.0	12.5	50.0	47.4	31.6	21.1	66.7	16.7	16.7	33.3	33.3	33.3	60.0	20.0	20.0	6.957	.54128			
5) I am tired from the day	37.5	12.5	62.5	15.8	31.6	42.1	66.7	16.7	16.7	33.3	33.3	33.3	20.0	20.0	60.0	5.6197	.689742			
6) I am tired because I had to much to do during the day	82.5	12.5	37.5	47.4	26.3	26.3	66.7	16.7	16.7	33.3	33.3	33.3	20.0	20.0	60.0	4.3441	.824825			
7) I am tired because I find it difficult to sleep	37.5	37.5	37.5	15.8	31.6	52.6	50.0	16.7	33.3	33.3	33.3	33.3	20.0	20.0	60.0	1.7407	.987956			
8) I am stressed at the thought off going to work	25.0	12.5	75.0	15.8	31.6	52.6	50.0	16.7	33.3	33.3	33.3	33.3	20.0	20.0	60.0	4.7904	.779729			
9) I wish I could go to bed	60.0	25.0	37.5	26.3	31.6	42.1	66.7	16.7	16.7	33.3	33.3	33.3	20.0	20.0	60.0	4.7307	.785929			
During my shift.....																				
1) I am alert to help my patients	75.0	12.5	25.0	42.1	47.4	10.5	50.0	16.7	33.3	33.3	33.3	33.3	60.0	20.0	20.0	6.1359	.832012			
2) I take pride and am happy to do my job	37.5	37.5	37.5	73.7	15.8	10.5	33.3	33.3	33.3	33.3	33.3	33.3	60.0	20.0	20.0	6.2553	.818683			
3) I think of my family often	12.5	12.5	87.5	78.9	5.3	15.8	60.0	16.7	33.3	33.3	33.3	33.3	40.0	40.0	20.0	17.4476	.025771			
4) I am concerned that my family are okay	82.5	37.5	12.5	89.5	5.3	5.3	66.7	16.7	16.7	33.3	33.3	33.3	60.0	20.0	20.0	7.6749	.465858			
5) My patients are my biggest concern	75.0	12.5	25.0	68.4	26.3	5.3	50.0	16.7	33.3	33.3	33.3	33.3	20.0	20.0	60.0	9.436	.306859			
6) I feel tired	37.5	12.5	62.5	31.6	42.1	26.3	33.3	50.0	16.7	33.3	33.3	33.3	60.0	20.0	20.0	5.9708	.650306			
7) I wish I could have a rest	60.0	37.5	25.0	78.9	5.3	15.8	66.7	16.7	16.7	33.3	33.3	33.3	40.0	20.0	40.0	7.0069	.535892			
8) I wish I could sleep for atleast an hour	60.0	25.0	37.5	73.7	10.5	15.8	66.7	16.7	16.7	33.3	33.3	33.3	40.0	20.0	40.0	4.4805	.811382			

Table 4.19: Significant Chi-Square test and cross tabulation results from youngest child's age versus 24-hour hours of a night shift employee (n: 42)

4.7 Summary

This chapter presented the finding obtained from the analysis of the questionnaires. The findings were presented in the form of tables and figures. This chapter included chi-square tests and cross-tabulations (Appendix 3). The findings revealed that Gender has a significant relationship to Family-work conflict. Other demographic factors also showed a significant relationship between a few factors relating to the family-work conflict.

Chapter Five

Discussion

5.1 Introduction

This chapter discusses the findings of the questionnaire, as presented in the previous chapter. When discussing results, previous research studies from the literature review are discussed together with the researchers' questions. The findings in this chapter, together with the literature from other research will help us determine if night shift staff do experience family-work conflict, and if so what are the possible solutions to this, and if these solutions are viable.

It is essential to examine the information presented from this study to answer the research questions. First, it is essential to discuss the demographics of the study, the 24-hour cycle of a shift employee, supportive structures, and solutions and lastly the research questions.

5.2 Section one- Demographics

The questionnaires were delivered to 52 participants, of those participants, only 42 questionnaires were completed and sent back to the researcher. A response rate of 80% was achieved. Demographics researched included gender, race, age, Marital status, rank, department, and children. According to research, gender, age, children and marital status influences family-work conflict; other demographics were asked to ensure that all race, rank, and departments were represented in the study.

Participants were asked to indicate their gender. Gender is an essential demographic because of gender roles (De Sousa, 2013). It is critical to ascertain if gender roles are an essential factor in Family-work conflict. Results from the study showed that 79% of the participants are female, while 21% were male. According to Chi-square values and P-values (Appendix 3), gender is an essential factor as it has a significant relationship with the questions posed to the participants. According to the study females experienced more family-work conflict than males,

this is also evident in other research studies (Yildirim & Aycanb, 2007; De Sousa, 2013; Byron, 2005).

Due to the literature finding that age is a factor of employees experiencing family-work conflict, the age of participants was indicated. According to literature, the older an employee, the less family-work conflict the employee experiences (Bagger & Gutek, 2008), this was not exactly true as the employees of all age groups experience family-work conflict, it was just experienced at different intensities and for different reasons. According to the cross-tabulation scores (Appendix 3), all age groups experience high levels of family-work conflict. The age group 31-40 experienced the highest levels of family-work conflict.

Marital status and gender roles go hand in hand; family work conflict affects this demographic on two fronts- through gender roles and marital roles (Powell & Greenhaus, 2010; De Sousa, 2013). Family-work conflict is experienced more by married employees than non-married employees. From the study, non-married employees showed lower levels of family-work conflict and more behaviours representing productivity behaviours at work.

The child demographic of the study looked at the age of the youngest child and the number of children. According to the cross-tabulation results (Appendix 3), employees with 1 or 2 children experienced more family-work conflict than employees with no or three or more children. It was also found that employees with their youngest child between the ages 11 to 17 experienced higher family-work conflict than children in other age groups.

The race, rank, and department of the participants were also asked. The relationship between these demographics and family-work conflict was not investigated. These demographics helped the researcher ensure that all races, ranks, and departments were represented in the study.

It needed to be noted the extent to which each demographic factor was affected. Each of the demographics will be explained in detail with the study results and literature in the next few topics. Each demographic factor is affected differently at each stage of the 24-hour cycle of the shift employees. The degree to which these factors affect the cycle can be summed up in correlation to the statistics found in the chi-square tests and cross tabulation (Appendix 3).

5.3 Section two- 24-hours of a night duty employee

Most studies investigated how work roles interfered with the family role, but for an organization, it is vital that we investigate how family roles affect work life. The 24-hour cycle of the employee needs to be investigated to analysis how employees use their time during their 12 hours of duty. As there are no other studies for us to compare this to, results and statistics will be analysed to discuss the relationships in this section. For an employee to be productive on their 2 hours on shift, they need to have enough rest; a grown adult needs a minimum of 6 hours of sleep for them to be rested enough to be productive (Guo et al., 2013). Analysis of how time is spent is crucial to understanding if the staff is getting enough rest. Each of the time periods will be discussed in relation to the demographic factors, to see which of the factors affect family-work conflict the most and least. Inferential statistics will also be included in this topic as it will be discussed in detail in relation to demographics.

5.3.1 When I go home from my shift

64% of employees agree that they are tired when they get home from their shift, it is therefore recommended that they sleep immediately to rejuvenate their bodies and minds. Only 38% of employees go to sleep straight after their shift, while 57% get their families ready for the day and do household chores. According to Guo et al., (2013) employees need time to wind down after their shift, which means they will have the energy to perform tasks when they get home. This will help them tired themselves out even further to get proper rest during the day. This becomes a problem when employees use the entire 12 hours to care for the home and family. 33% of staff look after their children when they get home from their shift.

From the statistics on SPSS and demographics in the section, the following has been noted (Appendix 3):

There is a significant relationship between activities done when an employee gets home from their shift and gender and chi-square and p-value statistics. According to the cross tabulation, females experience negative behaviours relating to family-

work conflict more than males do. Males tend to go home and rest, while females go home and look after their family and home before finding time to rest.

Different age groups also react to this time of the day differently. Employees in the age group 31-40 experience the most behaviours associated with less rest time. They tend to look after the family and home rather than rest compared to other age groups. Chi-square and P-value statistics show a significant relationship between childcare and employee ages.

Married and non-married employees also differ in this section, married employees experience behaviours which may be associated with family-work conflict more than non-married employees. Married employees tend to look after family and home more than rest as compared to non-married employees who agree that their family looks after their home, so they can rest. A significant relationship is evident between marital status and family members or spouse looking after the home and family while the employee rests.

Statistics also differ between parents and non-parents. Parents part took in behaviours like looking after the house and children, while non-parents rested when they got home. Parents in the groups "2 children." and youngest children between the ages of "11 to 17", tended to look after the family and home first before resting. A significant relation was found between children and getting my family ready for the day.

5.3.2 During the day

To ensure a proper work-life balance, employees should be taking time to ensure they spend sufficient time on work, family, and self (Yildirima & Aycanb, 2007). Therefore, time should be spent during the day equally between self and family. In this section, employees should be spending time taking time to rest and on personal time and time spent with family. However, if excess time is taken on family and home and hobbies and little time is taken to rest, the employee will be too tired to perform effectively. According to table 4.2, 57% prepare for when their families come home from work, 43% look after their children, 57% look after their

extended family. While 45% take time to watch TV, 67% spend time with friends and family, and 38% take time to enjoy their hobbies. Only 45% take time to rest during the day.

According to the SPSS statistics (Appendix 3), the following breakdown is concerned with each demographic.

In the gender statistics, males take time to rest, spend time watching tv and spend time with family and friends, 66.7% disagree that they look after children and 77.8% disagree that they spend time preparing for when their family gets home from work. While 69.7% of females agree that they prepare for when their family gets home, they look after children and extended family, very few of them take time to enjoy hobbies and time with friends, and only 36.4% take time to rest. These statistics show that women have fewer hours to rest and prepare for their shift ahead.

According to the age statistics, employees between the age group 31 to 40 experience more behaviours which are not conducive to productive behaviour during their shift, they spend time looking after their families and home, while very few of them take time to rest or spend time on hobbies and with friends. Those employees in the age group 41 to 50 have a more well-balanced life, they look after their children and families, but also find time to rest and engage in social activities and hobbies. According to Winslow (2005), individuals in a higher age group find balance more natural than those in a younger age group.

Married and non-married individuals share a lot of similar traits, they both look after their families and homes, they both take time to enjoy social lives and hobbies, but more employees that are not married find time to rest. In the sense of having balanced social life, Powell & Greenhaus (2010), agree that marital status does not affect family-work conflict, but when finding time to rest non-married employees find more time to rest than married employees showing that there is some effect on family-work conflict (De Sousa, 2013).

Employees with children experienced more family-work conflict than employees without children. However, the extent to which parents experienced family-work conflict depends on the number of children and the age of the youngest child. Employees with more children experienced less family-work conflict than

employees with one child; this could be because employees with more than one child have more experience with children and their children already have set schedules (Powell & Greenhaus, 2010). However, the age of the youngest child will also affect the amount of family-work conflict an employee faces (De Sousa, 2013). According to the findings in Appendix 3, employees with the youngest child between the ages 1- 17 experience higher family-work conflict than employees with children of other ages.

5.3.3 While sleeping during the day

Statistics in this section (table 4.3 and table 4.4) analyse the sleep and rest employees get during the day. This section gives us more insight into the quality of rest and sleeps night shift employees experience.

55% of the participants agree that they have the best sleep during the day. However, 26% disagree, stating they do not have a restful sleep during the day. This poses a problem as 26% of the employees are not getting a good rest, eventually, affecting their performance due to them not having enough rest.

67% of participants agree that they have a proper rest during the day, but 21% of the participants disagree with this statement, again this will affect their productivity.

43% of participants agree they find it difficult to sleep during the days. According to research, this could be because night shift work affects sleep patterns and employees find it difficult to sleep during the day (Guo et al., 2013).

48% of participants agree that they look after their homes during the day, 43% disagree with this statement. If employees are looking after their homes, they are not resting and therefore will not receive enough rest to perform their jobs correctly.

33% of the participants agree that they look after their children during the day, while 50% of them disagree with this statement. 50% of staff will have enough rest to perform their jobs, but 33% is a high number of staff that will not be well rested for their shift.

19% of participants cannot fall asleep, 24% of participants need to take medication to fall asleep, and 45% of employees agree that they have a problem falling asleep. These statistics are scary considering these employees could work in ICU's and high care departments, areas in which patients need around the clock care. If employees are not getting proper rest, they are not going to be productive.

According to research, a productive employee is one that is alert, is determined by the number of hours of patient care they delivered and the amount of skill that is shown during this care (De Sousa, 2013). If employees are not well rested they are unable to be alert, the number of hours of patient care and skill is not recognizable because the care of the patient is not at a 100% of their ability.

5.3.4 Before I start my shift

Employee's activities before they start their shift need to be considered, their shift is 12 hours, and this takes both mental and physical preparation (Byron, 2005). Results and statistics in this section are used to determine how ready an employee is for their shift. Results will be explained in accordance with the demographics of gender, age, marital status, and children (Appendix 3).

44% of Males and 39% of females agree that they are fully rested, but only 33% of males and 49% of females agree that they are ready for the night ahead. 44% of males and 33% of females are still tired from the day. 60% of the 33 respondents agree that they are tired because they had too much to do during the day. These statistics are of concern as less than 50% of staff on night shift would be alert and productive on night duty. 55% of males wish they could go back to sleep. Rest and sleep statistics are of concern, but family concern statistics show that males are less concerned about their family and home before going on shift than women.

The age group 41-50 agree that they are ready for their shift, they are well rested and believe their families are well-taken care off, however, 60% of them wish they could go back to sleep. Employees in the age group 31 to 40 seem to be in a better space before going back on shift, they believe their families and homes are taken care off, but 60% of them are still tired from the day. 66% of the respondents in the age group 50+ are tired because they find it challenging to sleep and are not

ready for the night ahead. This could be due to age factors rather than family-work conflict (Winslow, 2005). 50% of respondents in the age group 20 to 30 are tired from having too much to do during the day, and 57% of these respondents do not have peace of mind.

In this demographic, it appears that married respondents are more prepared for their night shift than non-married respondents, this is in accordance with Powell & Greenhaus (2010) who state that marital status does not affect family-work conflict.

Respondents in the children demographics are in sync with other statistics relating to children in this research study. Respondents with one child and with children between the age of 11 to 17 have a harder time getting ready for their shift than parents in other groups.

5.3.5 During my shift

It is essential to analyse activities and state of mind while on duty as this is when employee's attention is needed most at work, Family roles and care for their homes should be a second priority during this time (Guo et al., 2013). Patients need around the clock care, an employee who is not alert for even a second could be harmful to the patient.

Statistics from Appendix 3 revealed that:

Gender statistics revealed that both males and females experienced problems on the night shift, they are both tired, they both want time to sleep, and they are both concerned about their family. This in accordance with findings from Baxter (2002), in which both males and females experience family-work conflict. Females tend to take more pride in their work and try to be alert to look after their patients, statistics here could be because the study consisted of 79% of females and only 21% of males, but the nursing profession consists of majority females (De Sousa, 2013). 55% of males and more than 69% of females agree that they need a rest while on duty.

Age statistics in this section show that age groups "20 to 30", "31 to 40" and "50+", experience the most problems on duty, all three age groups would like time to

sleep. The majority of all 4 age groups agree that they take pride in doing their work and that they are alert to help their patients, however, those statistics range from 33% to 60%, showing that a significant percentage of these respondents are not alert to help their patients. Respondents between the age group 20 to 50, show crucial information regarding concern for home and family. These statistics show that family-work conflict is prevalent in all age groups but to different degrees, in most cases, it shows in the need to rest and or thoughts of family and home when patient care should be the priority.

It is evident from Table 4.16 that both married and non-married respondents require sleep, are concerned about their families, but the majority of them are also concerned about their patients. Married respondents have a higher concern for their family and home as compared to their patients being their biggest concern.

It is evident across all statistics regarding children that both parents and non-parents are experiencing a problem with rest and sleep; they are also both concerned about their families and homes. Patient care also seems to be a priority for them. Statistics in the youngest child's age (18 to 24) could be a misrepresentation of the group as only three respondents fell into this category. Further research into this demographic would be necessary for those statistics to be valid.

Findings in these sections show that all demographics are impacted by family-work conflict. The way in which the demographics experience family-work conflict differs among them. Some respondents experience family-work conflict because they are tired of duties and roles during the day and other experience family-work conflict because their mind is on their family rather than on their patients. It is evident however that all demographics requires rest and sleep during their shift.

5.3.6 Taking a break during my shift

Numerous studies have been done showing the adverse effects of inadequate sleep and rest on night shift employees; it is for this reason that night employees shift is structured the way they are by law (LRA, 1995; Guo et al., 2013; Khan et al., 1964). According to the LRA (1995), sleeping on duty is a dismissible offense and

is considered gross negligence on the part of the employee. However, if the company has contingency plans to allow for employees to rest while at work, the harmful effects on patients can be minimized.

100% of participants agree that if they had time to rest on duty, they could look after patients better, it would reduce mistakes, and it would make them more alert on duty. This is important as it is evident that even employees see the benefit of having time to rest on duty even though South African law and company dictates otherwise.

According to table 4.7, 7% of staff agree that they find time to rest while on duty, but 88% of staff do not rest on duty, which means there is a larger population of staff doing their duty with inadequate rest or sleep levels. This means that most of the staff are not rested implying that most patients are not receiving adequate care.

5.4 Section three- Their family

Participants have indicated that the two main reasons for employees working night shift is due to the increased salaries of night duty employees and the work-life balance they get from working the night shift. This is, therefore that families support this choice as it is done to improve the lives of their families (De Sousa, 2013). A supportive family is needed to ensure the employee is receiving adequate levels of rest and sleep. Employees with supportive families tend not to experience family-work conflict as they are not concerned about their families during their shift because they know their families and homes are well-taken care of (Khan et al., 1964).

5.4.1 My family

According to table 4.8, 71% of participants agree that their family love and support them, this is important as an employee that feels supportive is not concerned about their family and home because they know they are well-taken care off during the day and while at work. Of this only 31% of the participants agree that their family is supportive of their job choice, it is essential for families to understand the

reason for these employee's choice of working the night shift for their families to be supportive. 24% of the participants agree that their family is supportive of their working hours; 24% of participants agree that their spouse is helpful, while 21% agree that their spouse is supportive, again most employees work night shift due to the remuneration and the ability to have a better work-life balance, it is crucial for employees to convey these reasons to their families for them to be understanding.

Only 65% of participants agree that their family gives them time to rest and 57% of the participants agree that their family looks after their home while they rest and go to work. This means that 35% of employees are not given time to rest 43% of participants do not have the privilege of knowing their families and homes are looked after while asleep or at work. This has the most significant impact on the participant's family-work conflict due to these participants not having peace of mind while at work or enough rest to perform their jobs.

According to table 4.8, 33% of the participants do not need to look after their children, 31% agree that they must look after their children. 52% of the participant's children go to school or day-care and 45% of the participant's children are looked after by family. Care of children is necessary because this gives the employees enough time to rest and peace of mind knowing their children are taken care off.

5.4.2 My family can help me by

According to Table 4.16, the top four ways in which family can help staff are:

1) "Taking away some financial burdens"- the main reason most respondents work at night is that the pay is higher (Table 4.11). If family members could help with the finances at home, more staff would not feel pressured into working through the night and may as a result have more time to rest and look after their family and home.

2) "Give me time to sleep and rest"- employees working at night need sufficient time to rest and sleep. If they are looking after the family and home during the day, there are very few hours for them to rest and sleep before they must start their

shift. Another problem employees working night duty face is the inability to fall asleep, working night shift affects sleeping patterns, making it harder for night duty employees to fall asleep during the day despite them being tired (Guo et al., 2013).

3) "Looking after the kids"- the majority of time spent by parents working night shift is seeing to the children. Because these employees are home during the day, they are available to cart children around, taking them to school, helping with homework and spend time with the children. If the family could help with the children, these employees can rest and sleep during the day.

4) "Being understanding of my job" the top two reasons, employees work night duty is due to pay and work-life balance. This is not done out of personal preference but to enhance the lives of their families. Family members should, therefore, be more supportive of their jobs.

5.5 Section four- Their Job

Organizations need to take family-work conflict seriously as it impacts the organization's profitability if proper care is not given to patients (De Sousa, 2013). This would reduce the number of patients willing to receive care from the facility, doctors will not recommend their patients to this facility, and the hospital may have lawsuits against them for improper care. Although measures are taken by organizations to give night duty staff time off to rest, it is vital to consider the actions and responsibilities on staff's "on duty" days as their rest levels and activities during the day may impact their work at night (Khan et al., 1964).

5.5.1 My Job

From Table 4.10, it appears that staff is not receiving enough support during their shift. Only 62% of respondents agree that they know what is expected of them and only 36% agree that they have resources to perform their job efficiently. Less than 50% agree that their manager, supervisor, and peers are supportive during their shifts. However, 67% of employees feel they can attend to their patients and are always able to perform their jobs. 36% of staff feel their work does not affect their

family life, 29% believe their family life does not affect their jobs, and 69% agree that their jobs affect their sleep. These statistics are crucial for the company to analyse how they can improve the way they deal with night duty employees. It is evident from the results that these employees require more support from their company.

The top three reasons employees work night shift is (Figure 4.10):

1) The pay is better at night- employees feel a financial burden from their families, this was the primary way in which their family could support them. The pay and benefits for night duty staff are considerably higher than working during the day.

2) I have time to spend with my family- due to working the night shift; employees have more days off to spend with family. Also, they are home during the day on their “on duty” days to take care of their family are home.

3) I have a better work-life balance- for the reasons mentioned above, employees feel they have a better work-life balance than those employees working during the day.

4) Work is not stressful at night- reason 3 and 4 constituted 7% of the votes. Employees feel work is not stressful at night because most patients are asleep, and supervision is low, giving them time to rest and not put in as much effort in their job and performance.

The top three reasons employees do not like night shift (Figure 4.11) has to do with sleep patterns and rest. Research has shown that night duty employees sleep patterns are affected due to them working the night shift. Participants responses show an agreement with other research, as all three of the top reasons employees do not like night shift is due to rest and sleep.

5.5.2 My Company can help me by

From the above discussions, it is evident that the company needs to provide support for night duty employees. Supportive structures in place need to be more efficient and sustainable to ensure night duty employees receive the support they

require. Most companies have wellness programs and the human resources department for support, however, after the research was conducted, it shows that night duty employees do not have faith in these support structures.

According to results from this research, participants have selected the following options as their top three ways in which the company can support them.

1) Time to rest while on duty- this could be a problem as South African law considers this gross negligence on behalf of the night duty employee (LRA, 1995). Sleeping on duty is a dismissible offense. However, according to other researchers and the results from this study, giving staff time to rest and sleep makes them more productive and reduce mistakes that may occur.

2) Providing day-care for children- this free up time for night duty staff to rest during the day. If children are in school or day-care, employees have time to sleep knowing their children are safe.

3) Employing more staff on the shift- this could be expensive for the company but if the company employees people strategically they will be able to provide more staff to these shifts and therefore give staff time to rest. However, one of the leading reasons employees like night duty is because work is not as stressful during the night, this reason makes it challenge to substantiate the need for more staff on night duty.

Most research states that work-family conflict for night duty staff should not be the problem of the organization. It is evident that the company needs to play a proactive role in decreasing the effects of family-work balance to ensure that employees are productive during their shifts.

5.6 Research Question 1

“To understand if family-work conflict does impact work performance among night shift staff.”

Family-work conflict does affect employees; it affects employees of different demographics differential than those of other demographics.

Family-work conflict affects females more than men due to gender roles. However, more men are starting to help with family roles and females are giving up control of their gender roles and accepting men in their gender roles, looking after the family and home.

As per literature review and statistics, employees of different ages groups experience family-work conflict at different levels. Employees at a younger age group (20 to 30) experience minimal family-work conflict as they do not have family and homes to look after. Employees falling into the next age group (31 to 40) tend to experience high levels of family-work conflict as they are just starting their families, progressing in their work roles and starting a home. Employees in the following two age groups (44- 50+) experience minimal family-work conflict because they have set routines for their families, their children are older, and they have more experience balancing out their lives.

Marital status of employees has some impact on family-work conflict. Married employees tend to experience more family-work conflict than non-married employees. Gender roles play a part in this topic too, as married females experience more family-work conflict than males.

The age of the children and the number of children also affects family-work balance. The employees with children in the age groups 11-17 experience considerably higher work-family conflict than employees with children in other age categories. Employees with one child experiences more family-work conflict than employees with more children this could be due to the experience employees with more children have with children or the fact the employees with one child may have younger children than those with many children.

It is therefore evident that employees in different demographics experience family-work conflict. The fact that they have very few hours of sleep or time to rest is evident that it will affect their work. These employees spend time on their shift thinking about their families and worrying that they are okay, this takes their concentration away from their patients.

5.7 Research Question 2

“To find solutions to staff being more productivity on duty.”

According to the research, the following was identified by employees as ways that their families can help them:

1) *Taking away some financial burdens-* most employees part take in night shift as the pay is higher than day shift employees, they also get more time off to spend with their families. Unfortunately, there isn't much organizations can do to help with this except by offering a wellness program to help employees manage their finances better. However, families can maybe come together to decide on how to manage their finances better and maybe look at other solutions to their financial burdens.

2) *Giving me time to sleep and rest-* families can help by taking time to help around the house and with family. Organizations can help by providing day-care services for children

3) *Looking after the kids-* again family can help by providing more support looking after children and organizations can help by providing day-care.

4) *Being understanding of my job-* families need to take more time to be supportive of job choices of night shift employees, the main two reasons employees chose to work as night shift employees is due to finances and work-life balance. The organization can help by providing supportive services, like counselling services in employee wellness programs.

According to the research, organizations can help with family-work conflict by:

1) *Giving me an hour to sleep during my shift-* this statement is somewhat controversial. Nursing staff should be available and alert to patients throughout their shift. However, in the literature review, an hour's sleep is beneficial to an employee being productive.

2) *Providing day-care for my kids-* As mentioned above, providing day-care for children is beneficial for employees getting rest during the day, employees are more likely to sleep if they know their children are well-taken care off.

3) *Employing more staff to help my shift*- this will have financial implications for the organization. Employing more staff would mean the company is taking on costs of more employees on the shift, but this might help if resourcing is done strategically to ensure staff has time to rest on duty while another staff is available to stand in while other staff members can rest.

According to the research, these are the main ways employees require help from both family and work. By ensuring employee receive help in these ways, employees may get more time to rest and therefore, be more productive at work.

5.8 Research Question 3

“To identify if these solutions are viable and sustainable.”

From the solutions, the following have been identified by reasons mentioned above as viable solutions to family-work conflict.

1) *Wellness programs to help with family counselling and financial management*- this is a viable solution as most companies already have these wellness programs in place. However, according to the research, most employees do not use the company wellness programs and do not trust them, more marketing to employees on these programs needs to be done.

2) *Giving staff an hour to rest during their shift*- this can help with many of the problems mentioned above. This would negate the effects of not having a rest during the day ensuring staff is well rested to be productive. Employing additional staff on a rotational base to ensure all staff gets a chance to rest and patients are still taken care off. This would have financial implications for the company, but the cost of an unmonitored patient will be negated.

3) *Providing day-care for children*- Day-care for children will be a further costing to organizations, employers could also factor in day-care in the staff's salaries or charge them for the services at a minimal costing to employees. Day-care for children will not be necessary if employees get an hour's rest time while on shift.

The above solutions are viable. However, they do have a financial costing to the organization. This costing will however not compare to the amount of patient care

that is neglected due to employees not being well rested and being continuously concerned about their families.

5.9 Summary

In this chapter, finding from chapter four are discussed. The fundamental research questions were bases of the discussion. The significant topics discussed in this section provided insight from the findings in chapter four and was compared to the findings in other research projects discussed in chapter two. The next chapter will consist of the summary and the recommendations of the study.

Chapter Six

Conclusions and recommendations

6.1 Introduction

Chapter six offers the summary, findings, conclusions, and recommendations of the study. These conclusions are drawn from the combines of the results in chapter four and the discussion findings in chapter five. The recommendations are deduced from the key findings and the conclusions of the study.

6.2 Summary of the research study

Chapter one presented an introduction to the research study by providing an outline to the research problem, the problem statement, the studies purpose, the research questions, the research objectives and the rationale behind the study. It also presented the background of the study by highlighting night duty employees and family-work conflict. The definitions of fundamental constructs, the delimitations of the study and the definition of essential terms were also discussed.

Chapter two focused on the literature review where several studies on the family-work conflict and night duty employees were analysed. The literature presented in this section was categorized according to the questionnaire that was handed out to the identified population sample. These sections were the demographics of the study, 24-hour cycle of a night duty employee and the factors that affect employees at each stage, the family support systems and the company support systems and the possible solutions to work-family conflict. This section included statistics and literature from other studies to relating to family-work conflict, work-family conflict and other studies relating to night duty employees in other industries.

Chapter three identified the research methods and design used in the study. Data collection was explained to answer the research questions of the study. The instrument used comprised of closed-ended questions, and the validity of the

study was established during the pretesting of the questionnaire. The quantitative data were analysed using SPSS.

Chapter four offered the results of the study which was set to establish the effects of family-work conflict, possible solutions, and to see if these solutions are viable. The results of the study have satisfactorily answered the research questions of the study. Statistics were categorized according to the questionnaire, which took the form of demographics, 24-hour cycle of a night shift employee, supportive structures and possible solutions. Statistics were presented as inferential and descriptive statistics.

Chapter five discussed the findings of chapter four and were discussed in relation to the literature review presented in chapter two. The results of the study made known that many employees face family-work conflict but to different degrees. The viable possible solutions that the company could adopt were to market the company's wellness programs more efficiently for an employee to use the services, give employees time to rest on duty and to provide day-care facilities for employee's children.

6.3 Summary of the research findings

The research findings were grouped into how each demographic is affected by the 24-hours cycle and supportive structures:

6.3.1 Gender

Females were more prone to family-work conflict. Results and discussions indicated that due to gender roles, females spent more time looking after family and homes than resting for their shift ahead, while on shift their focus was divided between the family and work roles (De Sousa, 2013). Males also experienced conflict with the work, but this stemmed from finding it difficult to sleep during the day (Baxter, 2002). Males were also tired during their shift and thought of their families often. It was highlighted by the statistics that females experience conflict throughout the 24-hour cycle and men experienced conflict mostly during their shift.

6.3.2 Age

According to the statistics respondents in the age group 31 to 40 experience family-work conflict throughout the 24-hour cycle, this could be attributed to the fact that most of them are young parents or newly married couples. According to Winslow (2005), younger parents and married couples have less experience with scheduling of family responsibilities and are ambitious in the career roles. Respondents in the other age groups also experience conflict with regards to sleep patterns with the most conflict found during their shift.

6.3.3 Marital Status

Statistics analysed in marital status identified trends like those found in gender statistics. Married couples spent more time on family and home responsibilities and less time resting for their shift as compared to non-married respondents. Non-married respondents also experienced conflict from the concern of family members and thought of them during their shift. However, the statistics show that this is more prevalent in married couples.

6.3.4 Children

Respondent that had one child experienced more family-work conflict than those with no children or two or more children. According to Baxter (2002), this could be attributed to the age of the parents, younger couples tend only to have one child and due to their inexperience have not yet set out proper family routines. This makes dealing with family roles and work roles difficult.

The age of the youngest child impacts the degree that employees experience family-work conflict. The respondents with the youngest child between the ages of 11 and 17, experienced the most family-work conflict, in relation to findings by De Sousa (2013), these parents are dealing with teenage children who are study and parents need to provide support and assistance with their school and study routines.

Again, all respondents found sleep and resting an issue during their shift.

6.3.5 Family support structures

Bagger & Gutek (2008) state that family-work conflict can be reduced in the spouse is supportive of job choices and responsibilities. Respondents have indicated that their families can help them by giving them more time to rest, looking after the children and being supportive of their job.

6.3.6 Company support

According to the results, respondents ranked these methods as their top three choices on how the company can support them. Firstly, to have time to rest on duty, by providing day-care facilities for their children and lastly, by employing more staff on their shift.

6.3.7 Viable solutions the company can provide

After comparing solutions and their pros and cons, three methods of assisting employees to reduce family-work conflict was identified.

- 1) Better marketing of wellness programs to aid employees' wellbeing
- 2) Providing day-care for their children
- 3) Giving staff time to rest on duty

Although these may cost the company money, the costing of a patient not cared for properly is immeasurable.

6.4 Important findings from the research study

The study has been influenced by demographics, these demographic factors, such as gender, age, marital status, and children have been analysed using cross-tabulations and chi-square tests. The results have shown that females in the gender demographic have the higher family-work conflict indications than any other group in any other demographic. Due to gender role responsibility, females tend to have a higher level of family-work conflict because of their responsibilities

to their families and home. However, other demographic also experiences family-work conflict, but it is not as prominent as conflict experienced by females.

6.5 Conclusions

While females experience the most family-work conflict, all demographic experience family-work conflict to a certain degree. It is evident, however, that all respondents in the various demographics experience problems with sleep and rest for different reasons. Night duty affects sleeping patterns and employees working at night find it difficult to sleep during the day without aid or support. While the study has identified solutions to the phenomenon of family-work conflict, not all these solutions are viable. For example, one of the ways in which family can support a night shift employee is to take away some financial burdens, in South Africa, this is difficult due to the job market of the country. Family members find it difficult to find a job or the salaries offered are not high enough to aid in supporting this supportive option. Most night duty employees have indicated that they chose to work night duty because the salary and benefits are higher than day duty employees. Viable solutions have been identified on the part of the company, as costly as these solutions may be, it is the best interest of the company to put in contingency plans for family-work conflict as this could be detrimental to the productivity of the company.

Finally, it may be concluded that the study has answered the research questions and objectives and acknowledges the impact of family-work conflict on the organization. This study concurs with many other studies relating to family-work conflict and night duty employees.

6.6 Limitations of the present research study

Although measures were put in place to ensure that limitations of the study could be negated, the following should be considered when generalizing these statistics.

- 1) The nursing profession consists of mostly female employees, and therefore gender statistics could be skewed in favour of females when relating these findings to other industries.

2) Sleeping on duty in South Africa is a dismissible offense and respondents may lie to make it seem like they do not sleep on duty. Therefore, questions asking respondents if they sleep on duty have been removed. The confidentiality clause of the study was explained to respondents so that they would answer questions as openly and accurately as possible.

3) Numerous studies have been done on work-family conflict, research from those studies had to be adapted to suit this study. All information is accurate. However, information and finding of those research studies were used to show the other side of the coin.

6.7 Suggestions for further research

This study provides the bases for researching family-work conflict, but the following are recommendations for further in-depth research on this topic.

1) Information from previous research studies have given us an indication of how much sleep and rest is required on duty for an employee to be productive during their shift, but due to the laws and company policies, a true reflection of the amount of time has not been measured. Further research into this aspect is needed.

2) Responsibilities and duties performed during the day need to be measured. This is to ascertain the amount of time employees spend on family roles to get an accurate representation of family-work conflict.

3) De Sousa's (2013), study involves absenteeism results, to improve this study it would be interesting to identify the amount of time employees take leave or are unable to commit to their shifts due to family responsibilities.

4) the inclusion of more male participants. A study needs to be conducted on more male participants so that results and findings can be generalized to other industries.

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Appendix 1: Questionnaire

Informed Consent Letter

**UNIVERSITY OF KWAZULU-NATAL
GRADUATE SCHOOL OF BUSINESS AND LEADERSHIP**

Dear Respondent,

MBA Research Project
Researcher: Movini Pillay (0718724415)
Supervisor: Dr Muhammad Hoque (hoque@ukzn.ac.za)
Research Office: Ms P Ximba 031-2603587

I, **Movini Pillay** an MBA student, at the Graduate School of Business and Leadership, of the University of Kwa-Zulu Natal. You are invited to participate in a research project entitled **"The effects of Family Work Conflict on Employee Productivity among Night Shift employees in a Private Health Care Facility."**

The aim of this study is to investigate the effects of family life on employee that work night and how this affects their productivity. Research shows that working shifts has a detrimental effect on an employees' family life, their health and their productivity at work.

Through your participation I hope to understand the how night shift affects your family life, your sleeping patterns and your productivity at work. Your participation in this project is voluntary. **You may refuse to participate or withdraw from the project at any time with no negative consequence.** There will be no monetary gain from participating in this survey/focus group. Confidentiality and anonymity of records identifying you as a participant will be maintained by the Graduate School of Business and Leadership, UKZN.

If you have any questions or concerns about completing the questionnaire or about participating in this study, you may contact me or my supervisor at the contact details listed above.

The questionnaire should take you about 20 minutes to complete. I hope you will take the time to complete this survey. Thank you for your participation.

Sincerely

Movini Pillay

Investigator's Signature _____

Date _____

Please take note of the following instructions:

- The questionnaire consists of 3.5 pages
- Kindly complete the questions in the questionnaire by marking the relevant option with an x
- There are no incorrect answers (i.e. no right or wrong answer)
- Please be as honest as possible and please complete the entire questionnaire

Definitions:

Night Duty- a period of time during the night in which a person is scheduled to work. She/He works the night shift and sleeps during the day

Work Life Balance – concept including proper prioritizing between "work" (career and ambition) and "lifestyle" (health, pleasure, leisure, family and spiritual development/ meditation).

Family work conflict- the extent to which family life interferes with your work roles

Employee Productivity - is an assessment of the efficiency of a worker or group of workers. Productivity may be evaluated in terms of the output of an employee in a specific period of time.

Rest - have or take a break, recharge one's batteries, take it easy

Sleeping- A natural periodic state of rest for the mind and body, in which the eyes usually close and consciousness is completely or partially lost

UNIVERSITY OF KWAZULU-NATAL
GRADUATE SCHOOL OF BUSINESS AND LEADERSHIP

MBA Research Project
Researcher: Movini Pillay (0718724415)
Supervisor: Dr Muhammad Hoque (hoque@ukzn.ac.za)
Research Office: Ms P Ximba 031-2603587

CONSENT

I.....(full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project. I understand that I am at liberty to withdraw from the project at any time, should I so desire.

.....
SIGNATURE OF PARTICIPANT

.....
DATE

Gender: Male: Female:

Race: _____ Age:

How long are you working night shift _____ Months _____ Years

Marital Status: Married Single

Children: None 1 2 2+

Youngest child's age: _____

Are you the highest paid person in your house? Yes No

Does your spouse work: Yes No

Department: General ward ICU High Care

Type of Employment: Permanent: Part Time:

Rank: RN EN ENA

If RN: General Experienced Qualified

	Agree	Neutral	Disagree
<u>When I go home from night shift.....</u>			
1) I am extremely tired			
2) I go straight to sleep			
3) I get my family ready for their day			
4) I do all the household chores			
5) I look after my children			
6) My spouse/ family take care of the home so I can rest			

<u>During the day.....</u>			
1) I prepare for when my family comes home			
2) I rest			
3) I look after my children			
4) I look after my extended family			
5) I have another job			
6) I watch TV			
7) I spend time with family and friends			
8) I take time to enjoy my hobbies			

<u>While sleeping during the day.....</u>			
1) I have the best sleep			
2) I have a good rest			
3) I find it difficult to sleep			
4) I have to look after my home			
5) I have to look after my children			
6) I cannot fall asleep			
7) I take medication to fall asleep			
8) I have a problem falling asleep			

What time do you fall asleep when you get off night shift? _____

How many hours of sleep do you get? _____

<u>My Family.....</u>	Agree	Neutral	Disagree
1) Love and support me			
2) Support my job choices			
3) Are understanding of my working hours			
4) Give me time to rest			
5) Takes care of my home while I sleep and go to work			
6) My Spouse is very helpful			
7) My Children can look after themselves			
8) My children need me to look after them			
9) My children go to school and day care			
10) My family look after my children and my home			
11) My home life is stress free			
12) My Relationship with my spouse is supportive			

Before I start my night shift.....

1) I am fully rested			
2) I have peace of mind			
3) My family is well taken care off			
4) I am ready for the night ahead			
5) I am tired from the day			
6) I am tired because I had to much to do during the day			
7) I am tired because I find it difficult to sleep			
8) I am stressed at the thought off going to work			
9) I wish I could go to bed			

During my shift.....

1) I am alert to help my patients			
2) I take pride and am happy to do my job			
3) I think of my family often			
4) I am concerned that my family are okay			
5) My patients are my biggest concern			
6) I feel tired			
8) I wish I could have a rest			
9) I wish I could sleep for atleast an hour			

I love night shift because.....

1) I have time off to spend with my family			
2) I am able to spend the day looking after my family			
3) I have enough time to rest			
4) The pay is better for night shift			
5) I do not like night duty			
6) I am forced to do night duty			
7) I prefer working during the day			
8) I get to rest during the day and am more productive at night			
9) There is supervision and I have others to help me			
10) Work is not so stressful at night			
11) I can rest while my patients are asleep			
12) I have a better work-life balance			

Which of the above is the best part of working night shift? (1-12) _____

<u>What do I like least about night shift.....</u>	Agree	Neutral	Disagree
1) I do not get enough sleep			
2) It is difficult because there is little supervision			
3) Patients are more demanding at night			
4) I wish I was home with my family			
3) I do not get enough time to spend with my family			
6) I find it difficult to sleep during the day			
7) Family responsibilities stop me from resting during the day			
8) Night shift is hard because I work at night and during the day			
9) It changes my sleep patterns			
10) Night shift affects my family life			
11) Lack of rest affects my work			
12) It affects my sleep patterns			

Which of the above is the worst part of working night shift (1-11) _____

My Job.....

1) I know exactly what is expected off me			
2) I have enough resources to perform my job effectively			
3) If I do not know something I have people I can ask			
4) My Peers are very supportive			
3) My Manager is very supportive			
6) My Job does not affect my family			
7) My Family does not affect my job			
8) I am always able to perform my job			
5) My job does not affect my sleep			
10) I am still able to rest while at work			
11) I am always able to attend to my patients			
12) There is enough staff on my shift			

My Company can help me by.....

1) Providing better training for me			
2) Employing more staff to help my shift			
3) Providing a day care for my kids			
4) Giving me an hour to sleep during my shift			
3) Giving me an hour unpaid to sleep during my shift			
6) Providing assistance to help with my family problems			
7) Providing better supervision and support			
8) Adjusting my times to suit me and the company			

Which is the best way my company can help me (1-8) _____

My Family help me by.....

1) Looking after the kids			
2) Cooking			
3) Giving me time to sleep and rest			
4) They make me happy			
3) Take away some financial burdens			
6) Being understanding of my job			
7) Not fighting with me or making me upset			
8) Loving me			

My Family help me most by (1-8) _____

	Agree	Neutral	Disagree
Taking a break during my shift.....			
1) I still try to find time to rest			
2) I have a rest and feel much better to help patients afterwards			
3) I find that having a break reduces mistakes			
4) I find having a rest makes me more alert			

How many hours rest would you need to be more productive _____

1) I am aware of the company wellness program			
2) I use the company wellness program			
3) I find the company wellness program effective			
4) I am comfortable to speak to the operator of the wellness program			
5) My Manager is a very good support system			
6) My HR Department is effective in dealing with any issue I bring to them			

Does your company have a sleeping on duty policy Yes No

Is Sleeping on duty dismissable in your company Yes No

Appendix 2: Ethical clearance



28 November 2017

Mrs Movini Pillay
Graduate School of Business & Leadership
Westville Campus

Dear Mrs Pillay,

Protocol reference number: HSS/1874/017M

Project title: The effects of family work conflict on employee productivity among night shift employees in a private health care hospital

Approval Notification – Expedited Application

With regards to your response received on 20 November 2017 to our letter of 17 October 2017, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

Dr Shamila Naidoo (Deputy Chair)

/ms

cc Supervisor: Dr Muhammad Hoque
cc Academic Leader Research: Dr Emmanuel Mutambare
cc School Administrator: Ms Zarina Bullyra]

Humanities & Social Sciences Research Ethics Committee

Dr Shenaka Singh (Chair)

Westville Campus, Govan Mbeki Boulevard

Postal Address: Private Bag X54001, Durban 4000

Telephone: +27 (0) 31 266 3567/3568/3567 Facsimile: +27 (0) 31 266 4809 Email: shsrao@ukzn.ac.za / scrm@ukzn.ac.za / ethics@ukzn.ac.za

Website: www.ukzn.ac.za



1918 - 2018
100 YEARS OF ACADEMIC EXCELLENCE

Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville

Appendix 3: Chi-square and Cross tabulations

	Gender %						Chi-Square	P-Value
	Male			Female				
	A	N	D	A	N	D		
When I go home from night shift.....								
1) I am extremely tired	44.4	11.1	44.4	69.7	21.2	9.1	6.3833	.045829
2) I go straight to sleep	66.7	22.2	11.1	30.3	12.1	57.8	6.1657	.045829
3) I get my family ready for their day	11.1	33.3	55.6	69.7	9.1	21.2	10.0758	.006487
4) I do all the household chores	11.1	11.1	77.8	75.8	27.3	3.0	11.0657	.003955
5) I look after my children	11.1	22.2	66.7	51.5	3.0	30.3	5.2088	.073949
6) My spouse/ family take care of the home so I can rest	77.8	11.1	11.1	27.3	27.3	45.5	7.7	.02128
During the day.....								
1) I prepare for when my family comes home	11.1	11.1	77.8	69.7	21.2	9.1	0.4737	.789095
2) I rest	77.8	11.1	11.1	36.4	18.2	45.5	5.0825	.078766
3) I look after my children	11.1	11.1	66.7	57.8	15.2	18.2	8.6734	.01308
4) I look after my extended family	11.1	44.4	44.4	57.8	8.1	36.4	10.6202	.004941
5) I have another job	22.2	44.4	33.3	24.2	6.1	69.7	8.8155	.012182
6) I watch TV	55.6	11.1	33.3	42.4	24.2	33.3	0.8386	.65752
7) I spend time with family and friends	77.8	11.1	11.1	63.6	15.2	21.2	0.6717	.714724
8) I take time to enjoy my hobbies	44.4	22.2	33.3	36.4	9.1	54.5	1.7818	.410283
Before I start my night shift.....								
1) I am fully rested	44.4	11.1	44.4	39.4	39.4	21.2	3.1988	.202014
2) I have peace of mind	55.6	11.1	33.3	51.5	24.2	24.2	0.8142	.665577
3) My family is well taken care off	77.8	11.1	11.1	45.5	30.3	24.2	2.974	.228052
4) I am ready for the night ahead	33.3	22.2	44.4	48.5	21.2	30.3	0.7865	.674873
5) I am tired from the day	44.4	11.1	44.4	33.3	24.2	42.4	0.8202	.663583
6) I am tired because I had to much to do during the day	22.2	11.1	66.7	60.8	18.2	21.2	6.9214	.031408
7) I am tired because I find it difficult to sleep	55.6	22.2	22.2	39.4	18.2	42.4	1.2492	.535487
8) I am stressed at the thought off going to work	33.3	22.2	44.4	27.3	15.2	57.8	0.5257	.76886
9) I wish I could go to bed	55.6	11.1	33.3	33.3	24.2	42.4	1.6301	.442623
During my shift.....								
1) I am alert to help my patients	44.4	11.1	44.4	54.5	36.4	9.1	6.8976	.031782
2) I take pride and am happy to do my job	55.6	11.1	33.3	63.6	27.3	9.1	3.7594	.152633
3) I think of my family often	11.1	22.2	66.7	69.7	9.1	21.2	9.992	.006765
4) I am concerned that my family are okay	55.6	22.2	22.2	78.8	9.1	12.1	2.0484	.359443
5) My patients are my biggest concern	44.4	11.1	44.4	66.7	21.2	12.1	4.8217	.08974
6) I feel tired	55.6	11.1	33.3	39.4	27.3	33.3	1.7441	.418092
7) I wish I could have a rest	55.6	33.3	11.1	72.7	9.1	18.2	3.4232	.180577
8) I wish I could sleep for atleast an hour	55.6	22.2	22.2	69.7	12.1	18.2	0.778	.67781

		Age %												P-Value	
		20 to 30			31 to 40			41 to 50			50+				Chi-Square
		A	N	D	A	N	D	A	N	D	A	N	D		
When I go home from night shift.....															
1) I am extremely tired	50.0	21.4	28.6	70.0	20.0	10.0	80.0	0.0	20.0	66.7	33.3	0.0	3.0002	.808819	
2) I go straight to sleep	42.9	21.4	35.7	30.0	65.0	5.0	80.0	0.0	40.0	66.7	33.3	66.7	6.4085	.378911	
3) I get my family ready for their day	60.0	14.3	35.7	75.0	15.0	10.0	20.0	0.0	80.0	33.3	33.3	33.3	8.0874	.23177	
4) I do all the household chores	60.0	21.4	28.6	60.0	30.0	10.0	80.0	0.0	20.0	33.3	33.3	33.3	2.6484	.651501	
5) I look after my children	28.6	28.6	14.3	65.0	5.0	25.0	20.0	0.0	80.0	0.0	0.0	100.0	13.3235	.038177	
6) My spouse/ family take care of the home so I can rest	57.1	35.7	7.1	25.0	35.0	40.0	40.0	20.0	40.0	33.3	33.3	33.3	5.1488	.524887	
During the day.....															
1) I repair for when my family comes home	57.1	14.3	28.6	55.0	25.0	20.0	80.0	0.0	20.0	33.3	33.3	33.3	1.3469	.968011	
2) I rest	64.3	0.0	35.7	25.0	35.0	40.0	60.0	0.0	40.0	66.7	0.0	33.3	4.4265	.619165	
3) I look after my children	42.9	7.1	14.3	55.0	25.0	15.0	20.0	0.0	80.0	0.0	0.0	100.0	5.9877	.424572	
4) I look after my extended family	21.4	14.3	64.3	60.0	5.0	35.0	60.0	20.0	20.0	33.3	66.7	0.0	7.8137	.252069	
5) I have another job	21.4	21.4	57.1	25.0	15.0	60.0	20.0	0.0	80.0	33.3	0.0	66.7	1.0508	.983201	
6) I watch TV	64.3	7.1	28.6	30.0	30.0	40.0	80.0	0.0	20.0	0.0	66.7	33.3	5.335	.501619	
7) I spend time with family and friends	50.0	21.4	28.6	70.0	15.0	15.0	80.0	0.0	20.0	100.0	0.0	0.0	2.3877	.880816	
8) I take time to enjoy my hobbies	35.7	7.1	57.1	30.0	20.0	50.0	80.0	0.0	20.0	33.3	0.0	66.7	3.6819	.722319	
Before I start my night shift.....															
1) I am fully rested	42.9	35.7	35.7	25.0	30.0	30.0	60.0	20.0	20.0	0.0	66.7	33.3	1.1158	.98084	
2) I have peace of mind	35.7	7.1	57.1	50.0	35.0	15.0	80.0	20.0	0.0	100.0	0.0	0.0	8.4919	.2044231	
3) My family is well taken care off	35.7	28.6	35.7	60.0	25.0	15.0	80.0	20.0	0.0	33.3	33.3	33.3	3.0408	.803706	
4) I am ready for the night ahead	42.9	21.4	35.7	40.0	25.0	35.0	80.0	20.0	0.0	33.3	0.0	66.7	0.9416	.98773	
5) I am tired from the day	21.4	28.6	50.0	45.0	15.0	40.0	40.0	20.0	40.0	33.3	33.3	33.3	2.5133	.868972	
6) I am tired because I had to much to do during the day	60.0	14.3	35.7	60.0	20.0	25.0	40.0	20.0	40.0	33.3	33.3	33.3	1.6744	.947079	
7) I am tired because I find it difficult to sleep	35.7	28.6	35.7	45.0	15.0	40.0	40.0	0.0	60.0	66.7	33.3	0.0	4.3994	.6228	
8) I am stressed at the thought off going to work	21.4	21.4	57.1	35.0	20.0	45.0	20.0	0.0	80.0	33.3	0.0	66.7	1.4234	.984419	
9) I wish I could go to bed	28.6	21.4	50.0	40.0	25.0	35.0	60.0	0.0	40.0	33.3	33.3	33.3	2.2087	.869534	
During my shift.....															
1) I am alert to help my patients	50.0	7.1	42.9	55.0	25.0	20.0	60.0	20.0	20.0	33.3	33.3	33.3	2.8023	.833214	
2) I take pride and am happy to do my job	50.0	21.4	28.6	70.0	25.0	5.0	80.0	40.0	0.0	66.7	0.0	33.3	4.4751	.612657	
3) I think of my family often	42.9	7.1	50.0	70.0	5.0	25.0	60.0	40.0	0.0	33.3	33.3	33.3	6.1083	.411165	
4) I am concerned that my family are okay	71.4	21.4	7.1	85.0	5.0	10.0	40.0	20.0	40.0	66.7	0.0	33.3	8.2333	.221502	
5) My patients are my biggest concern	71.4	21.4	7.1	60.0	20.0	20.0	40.0	20.0	40.0	66.7	0.0	33.3	3.7472	.710839	
6) I feel tired	21.4	28.6	50.0	50.0	30.0	20.0	40.0	40.0	20.0	100.0	0.0	0.0	4.5721	.569739	
7) I wish I could have a rest	64.3	14.3	21.4	80.0	10.0	10.0	40.0	40.0	20.0	66.7	0.0	33.3	5.55	.475434	
8) I wish I could sleep for atleast an hour	64.3	7.1	28.6	75.0	15.0	10.0	40.0	40.0	20.0	66.7	0.0	33.3	6.0415	.418554	

Marital Status %										
	Married				Not Married				Chi-Square	P-Value
	A	N	D		A	N	D			
When I go home from night shift.....										
1) I am extremely tired	59.1	22.7	18.2	70.0	15.0	15.0	15.0	0.586	.746028	
2) I go straight to sleep	22.7	13.6	63.6	55.0	15.0	30.0	30.0	5.3669	.068326	
3) I get my family ready for their day	72.7	13.6	13.6	40.0	15.0	45.0	45.0	5.5841	.061296	
4) I do all the household chores	50.0	36.4	13.6	65.0	10.0	25.0	4.1809	1.23631		
5) I look after my children	50.0	4.5	45.5	35.0	15.0	50.0	1.7977	.407032		
6) My spouse/family take care of the home so I can rest	22.7	36.4	40.9	55.0	10.0	35.0	6.0184	.049331		
During the day.....										
1) I prepare for when my family comes home	63.6	22.7	13.6	50.0	15.0	35.0	2.6775	.262173		
2) I rest	40.9	22.7	36.4	50.0	10.0	40.0	1.2459	.536351		
3) I look after my children	45.5	18.2	36.4	40.0	50.0	10.0	1.0182	.601042		
4) I look after my extended family	68.2	13.6	18.2	25.0	15.0	60.0	8.925	.011533		
5) I have another job	22.7	9.1	68.2	25.0	20.0	55.0	1.1895	.551698		
6) I watch TV	45.5	31.8	22.7	45.0	10.0	45.0	3.8868	.143213		
7) I spend time with family and friends	77.3	13.6	9.1	55.0	15.0	30.0	3.1977	.202126		
8) I take time to enjoy my hobbies	40.9	13.6	45.5	35.0	10.0	55.0	0.4033	.817383		
Before I start my night shift.....										
1) I am fully rested	45.5	31.8	22.7	35.0	35.0	30.0	0.5263	.768636		
2) I have peace of mind	68.2	18.2	13.6	35.0	25.0	40.0	5.2095	.073921		
3) My family is well taken care of	54.5	27.3	18.2	50.0	25.0	25.0	0.2893	.865344		
4) I am ready for the night ahead	63.6	13.6	22.7	25.0	30.0	45.0	6.3251	.042317		
5) I am tired from the day	31.8	27.3	40.9	40.0	15.0	45.0	0.9736	.614579		
6) I am tired because I had to much to do during the day	45.5	22.7	31.8	60.0	10.0	30.0	1.4525	.483717		
7) I am tired because I find it difficult to sleep	45.5	45.5	9.1	40.0	30.0	30.0	3.1341	.208661		
8) I am stressed at the thought of going to work	27.3	18.2	54.5	30.0	15.0	55.0	0.0913	.955374		
9) I wish I could go to bed	36.4	22.7	40.9	40.0	20.0	40.0	0.0749	.963259		
During my shift.....										
1) I am alert to help my patients	59.1	27.3	13.6	45.0	35.0	20.0	0.8538	.652545		
2) I take pride and am happy to do my job	72.7	22.7	4.5	50.0	25.0	25.0	3.965	.137722		
3) I think of my family often	72.7	18.2	9.1	40.0	5.0	55.0	10.6263	.004926		
4) I am concerned that my family are okay	81.8	4.5	13.6	65.0	20.0	15.0	2.5169	.284091		
5) My patients are my biggest concern	63.6	22.7	13.6	60.0	15.0	25.0	1.061	.588307		
6) I feel tired	45.5	36.4	18.2	40.0	20.0	40.0	2.8	.246597		
7) I wish I could have a rest	68.2	13.6	18.2	70.0	15.0	15.0	0.0823	.959691		
8) I wish I could sleep for atleast an hour	63.6	18.2	18.2	70.0	10.0	20.0	0.5727	.750989		

		Number of Children %													
		No Children			1 Child			2 Children			3 + Children			Chi-Square	P-Value
		A	N	D	A	N	D	A	N	D	A	N	D		
When I go home from night shift.....															
1) I am extremely tired		66.7	22.2	11.1	66.7	11.1	22.2	52.9	11.8	35.3	85.7	0.0	14.3	3.5774	.73364
2) I go straight to sleep		11.1	22.2	66.7	77.8	0.0	22.2	29.4	11.8	58.8	42.9	28.6	28.6	11.3463	.078246
3) I get my family ready for their day		11.1	22.2	66.7	77.8	11.1	11.1	82.4	17.6	0.0	28.6	0.0	71.4	17.3036	.00823
4) I do all the household chores		44.4	11.1	44.4	77.8	11.1	11.1	47.1	47.1	5.9	71.4	0.0	28.6	11.7888	.066848
5) I look after my children		0.0	0.0	0.0	55.6	0.0	44.4	64.7	5.9	29.4	14.3	0.0	85.7	10.2408	.114889
6) My spouse/ family take care of the home so I can rest		66.6	22.2	11.1	44.4	11.1	55.6	17.6	35.3	47.1	42.9	14.3	42.9	7.9745	.239877
During the day.....															
1) I prepare for when my family comes home		11.1	33.3	55.6	77.8	0.0	22.2	64.7	29.4	5.9	71.4	0.0	28.6	11.4239	.076127
2) I rest		77.8	11.1	11.1	33.3	11.1	55.6	23.5	29.4	47.1	71.4	0.0	28.6	9.1694	.164273
3) I look after my children		0.0	0.0	0.0	77.8	0.0	22.2	58.8	23.5	17.6	14.3	0.0	85.7	19.5616	.003313
4) I look after my extended family		22.2	33.3	44.4	22.2	0.0	77.8	64.7	5.9	29.4	71.4	28.6	0.0	10.6014	.101504
5) I have another job		22.2	33.3	44.4	0.0	11.1	88.9	35.3	11.8	52.9	28.6	0.0	71.4	4.3013	.635975
6) I watch TV		55.6	11.1	33.3	44.4	0.0	55.6	35.3	41.2	23.5	57.1	14.3	28.6	6.5997	.350458
7) I spend time with family and friends		44.4	22.2	33.3	88.9	11.1	0.0	58.8	17.6	23.5	85.7	0.0	14.3	2.54931	.862931
8) I take time to enjoy my hobbies		22.2	22.2	55.6	44.4	0.0	55.6	29.4	17.6	52.9	71.4	0.0	28.6	3.8061	.702895
Before I start my night shift.....															
1) I am fully rested		66.7	22.2	11.1	11.1	33.3	55.6	41.2	41.2	17.6	42.9	28.6	28.6	8.3826	.211389
2) I have peace of mind		66.7	11.1	22.2	11.1	22.2	66.7	52.9	29.4	17.6	85.7	14.3	0.0	10.925	.090722
3) My family is well taken care of		44.4	11.1	44.4	44.4	44.4	44.4	52.9	23.5	23.5	71.4	28.6	0.0	4.6857	.594707
4) I am ready for the night ahead		44.4	11.1	44.4	33.3	44.4	22.2	47.1	17.6	35.3	57.1	14.3	28.6	4.2009	.649506
5) I am tired from the day		44.4	0.0	55.6	33.3	22.2	44.4	29.4	35.3	35.3	42.9	14.3	42.9	1.4885	.960398
6) I am tired because I had to much to do during the day		55.6	0.0	44.4	66.7	11.1	22.2	47.1	29.4	23.5	42.9	14.3	42.9	3.068	.800261
7) I am tired because I find it difficult to sleep		33.3	33.3	33.3	55.6	33.3	11.1	35.3	11.8	52.9	57.1	0.0	42.9	5.5822	.471583
8) I am stressed at the thought of going to work		33.3	0.0	66.7	33.3	22.2	44.4	23.5	29.4	47.1	28.6	0.0	71.4	2.5997	.857144
9) I wish I could go to bed		44.4	22.2	33.3	33.3	22.2	44.4	29.4	23.5	47.1	57.1	14.3	28.6	5.8386	.430106
During my shift.....															
1) I am alert to help my patients		66.7	11.1	22.2	33.3	44.4	22.2	52.9	5.9	41.2	57.1	14.3	28.6	5.9965	.423581
2) I take pride and am happy to do my job		33.3	33.3	33.3	77.8	11.1	11.1	70.6	23.5	5.9	57.1	28.6	14.3	5.995	.423754
3) I think of my family often		11.1	77.8	11.1	77.8	0.0	22.2	70.6	11.8	17.6	57.1	28.6	14.3	13.5494	.035086
4) I am concerned that my family are okay		55.6	33.3	11.1	88.9	0.0	11.1	82.4	5.9	11.8	57.1	14.3	28.6	5.2444	.512885
5) My patients are my biggest concern		66.7	11.1	22.2	66.7	22.2	11.1	64.7	23.5	11.8	42.9	14.3	42.9	4.0075	.675656
6) I feel tired		44.4	0.0	55.6	33.3	33.3	33.3	41.2	41.2	17.6	57.1	28.6	14.3	3.5769	.733708
7) I wish I could have a rest		44.4	33.3	22.2	88.9	0.0	11.1	78.5	5.9	17.6	57.1	28.6	14.3	4.9888	.545251
8) I wish I could sleep for atleast an hour		44.4	22.2	33.3	88.9	0.0	11.1	70.6	11.8	17.6	57.1	28.6	14.3	3.503	.7435567

Appendix 4: Turn-it-in Report

Dissertation		Internet Source	
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4	Submitted to Regenesys Business School	Submitted to University of Wales Institute, Cardiff	<1%
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5	Kristin Byron. "A meta-analytic review of work-family conflict and its antecedents", Journal of Vocational Behavior, 2005	Timothy A. Judge. "Job and life attitudes of male executives.", Journal of Applied Psychology, 1994	<1%
	Publication	Publication	
6	Anafarta, Nilgün, and Ayse Kuruzüm. "Demographic Predictors of Work-Family Conflict for Men and Women: Turkish Case", International Journal of Business and Management, 2012.		
	Publication		
7	insights.ovid.com		